Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 12:40 AM UTC

PDB ID	:	4U25 / pdb_00004u25
Title	:	Crystal structure of the E. coli ribosome bound to virginiamycin M1.
Authors	:	Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.
Deposited on	:	2014-07-16
Resolution	:	2.90 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

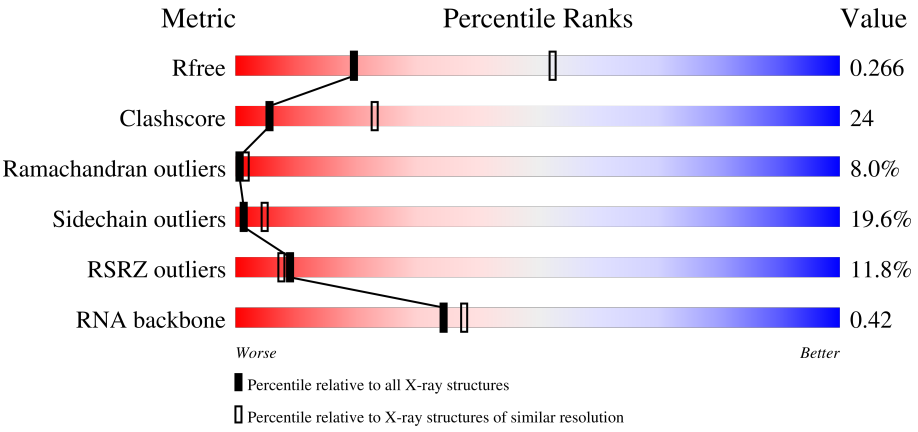
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.90 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	2481 (2.90-2.90)
Clashscore	190562	2690 (2.90-2.90)
Ramachandran outliers	187476	2623 (2.90-2.90)
Sidechain outliers	187428	2625 (2.90-2.90)
RSRZ outliers	180081	2481 (2.90-2.90)
RNA backbone	3983	1120 (3.10-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1539	3% 33% 52% 15%
1	CA	1539	6% 33% 53% 13%
2	AB	218	9% 19% 50% 24% 7%
2	CB	218	21% 26% 51% 20% .

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Mol	Chain	Length	Quality of chain
3	AC	206	3% 44% 39% 15%
3	CC	206	10% 47% 40% 12%
4	AD	205	6% 32% 45% 18% 5%
4	CD	205	7% 38% 44% 16%
5	AE	150	5% 36% 47% 17%
5	CE	150	9% 32% 40% 25%
6	AF	100	5% 34% 39% 22% 5%
6	CF	100	11% 31% 45% 19% 5%
7	AG	151	15% 46% 38% 17%
7	CG	151	38% 37% 53% 9%
8	AH	129	3% 36% 40% 23%
8	CH	129	7% 47% 39% 13%
9	AI	127	15% 39% 35% 23%
9	CI	127	40% 39% 40% 20%
10	AJ	98	14% 27% 41% 29%
10	CJ	98	41% 44% 36% 17%
11	AK	117	6% 43% 39% 15%
11	CK	117	3% 35% 45% 19%
12	AL	123	6% 49% 44% 5%
12	CL	123	15% 34% 50% 13%
13	AM	114	11% 34% 45% 18%
13	CM	114	60% 38% 48% 14%
14	AN	100	15% 34% 43% 16%
14	CN	100	39% 36% 44% 16%
15	AO	88	6% 48% 39% 14%

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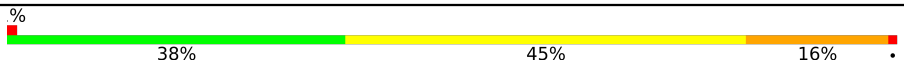
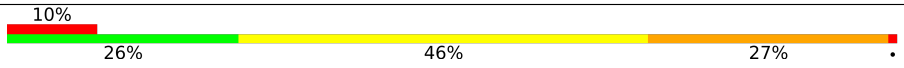
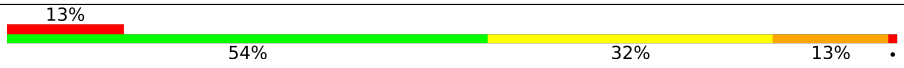
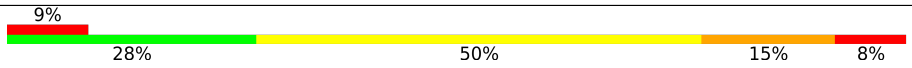
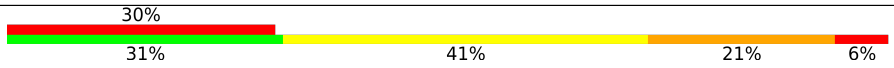
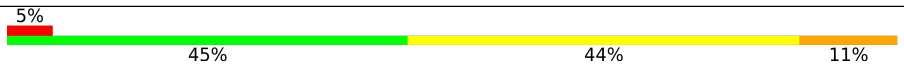
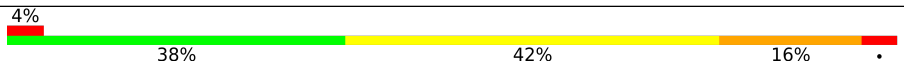
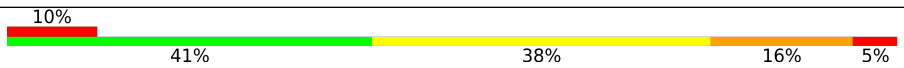
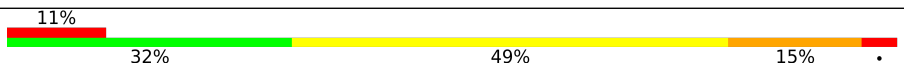
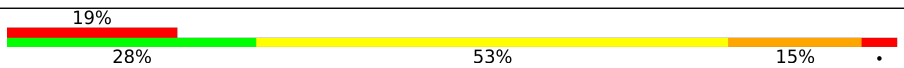
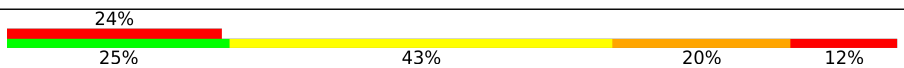
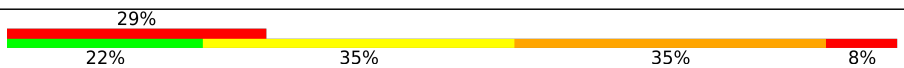
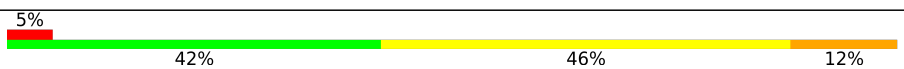
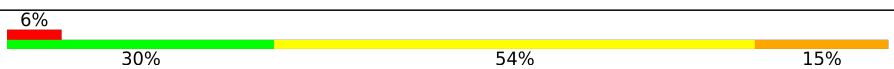
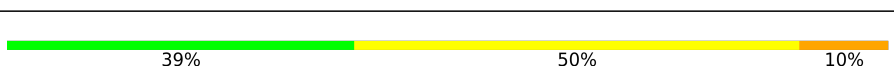
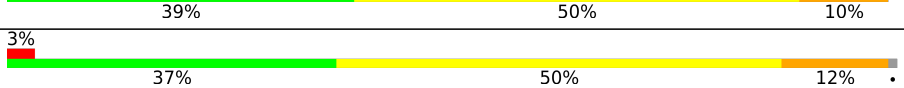
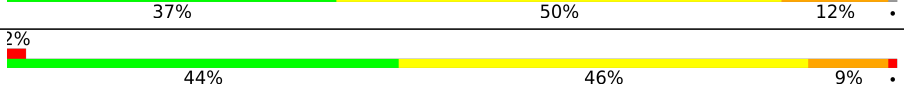
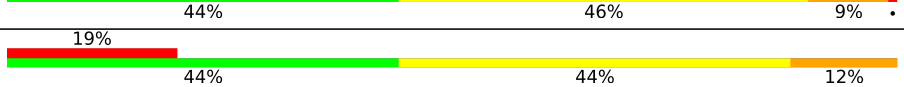
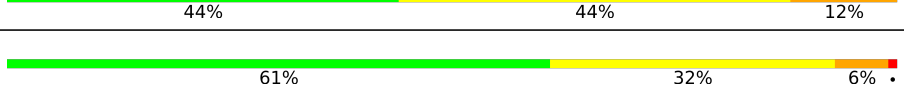
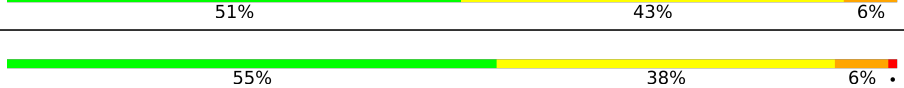
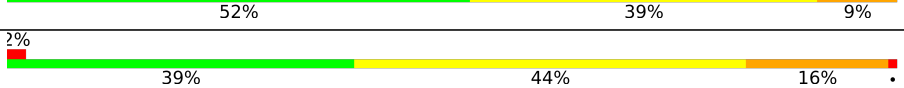
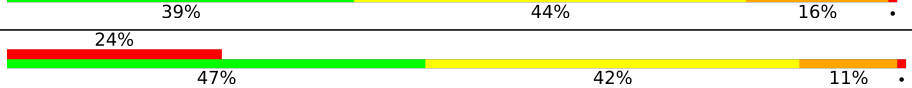
Mol	Chain	Length	Quality of chain
15	CO	88	
16	AP	82	
16	CP	82	
17	AQ	80	
17	CQ	80	
18	AR	55	
18	CR	55	
19	AS	79	
19	CS	79	
20	AT	85	
20	CT	85	
21	AU	51	
21	CU	51	
22	BA	2903	
22	DA	2903	
23	BB	119	
23	DB	119	
24	BC	271	
24	DC	271	
25	BD	209	
25	DD	209	
26	BE	201	
26	DE	201	
27	BF	177	
27	DF	177	

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Mol	Chain	Length	Quality of chain
28	BG	176	2% 61% 35%
28	DG	176	23% 51% 43% 6%
29	BH	149	60% 28% 46% 22% 5%
29	DH	149	67% 36% 48% 11%
30	BI	141	64% 35% 46% 15%
30	DI	141	66% 40% 46% 12%
31	BJ	142	67% 28% 5%
31	DJ	142	13% 48% 42% 9%
32	BK	122	45% 45% 9%
32	DK	122	12% 52% 35% 12%
33	BL	143	48% 41% 10%
33	DL	143	31% 51% 36% 12%
34	BM	136	65% 30%
34	DM	136	7% 60% 34% 6%
35	BN	120	47% 44% 8%
35	DN	120	35% 36% 48% 15%
36	BO	116	41% 47% 11%
36	DO	116	15% 53% 40% 8%
37	BP	114	61% 35%
37	DP	114	17% 46% 40% 10%
38	BQ	117	53% 38% 9%
38	DQ	117	22% 50% 45%
39	BR	103	46% 42% 10%
39	DR	103	19% 50% 39% 11%
40	BS	110	60% 31% 9%

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Mol	Chain	Length	Quality of chain
40	DS	110	27% 39% 46% 13%
41	BT	93	5% 51% 35% 11%
41	DT	93	47% 33% 46% 17%
42	BU	102	% 53% 36% 10%
42	DU	102	46% 33% 46% 17%
43	BV	94	56% 35% 9%
43	DV	94	3% 59% 38%
44	BW	76	% 57% 38% 5%
44	DW	76	26% 75% 18%
45	BX	77	% 55% 36% 9%
45	DX	77	30% 35% 42% 23%
46	BY	63	10% 38% 43% 16%
46	DY	63	41% 22% 63% 13%
47	BZ	58	66% 31%
47	DZ	58	14% 50% 33% 17%
48	B0	56	39% 55%
48	D0	56	21% 54% 39% 5%
49	B1	50	4% 42% 40% 16%
49	D1	50	34% 56% 30% 12%
50	B2	46	2% 54% 41%
50	D2	46	43% 43% 46% 9%
51	B3	64	61% 33% 6%
51	D3	64	48% 59% 33% 8%
52	B4	38	50% 39% 11%
52	D4	38	34% 61% 29% 11%

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Mol	Chain	Length	Quality of chain
53	B5	228	51% 49% 23% 11% 16%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	AA	1659	-	-	-	X
54	MG	DA	3027	-	-	-	X
54	MG	DA	3062	-	-	-	X

2 Entry composition (i)

There are 57 unique types of molecules in this entry. The entry contains 288258 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1538	Total	C	N	O	P	0	0	0
			32995	14716	6050	10691	1538			
1	CA	1539	Total	C	N	O	P	0	0	0
			33015	14725	6052	10699	1539			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			
2	CB	218	Total	C	N	O	S	0	0	0
			1705	1081	305	312	7			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			
3	CC	206	Total	C	N	O	S	0	0	0
			1625	1028	305	289	3			

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
4	CD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			
5	CE	150	Total	C	N	O	S	0	0	0
			1106	687	211	202	6			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			
6	CF	100	Total	C	N	O	S	0	0	0
			818	515	148	149	6			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			
7	CG	151	Total	C	N	O	S	0	0	0
			1182	735	227	216	4			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
8	CH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
9	CI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CJ	98	Total	C	N	O	S	0	0	0
			787	493	150	143	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			
11	CK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
12	CL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			
13	CM	114	Total	C	N	O	S	0	0	0
			884	546	178	157	3			

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
14	CN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	1			
15	CO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	1			

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
16	CP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			
17	CQ	80	Total	C	N	O	S	0	0	0
			649	411	121	114	3			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	55	Total	C	N	O	0	0	0
			456	288	86	82			
18	CR	55	Total	C	N	O	0	0	0
			456	288	86	82			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			
19	CS	79	Total	C	N	O	S	0	0	0
			638	408	120	108	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
20	CT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			
21	CU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			

- Molecule 22 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			
22	DA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	119	Total	C	N	O	P	0	0	0
			2549	1135	466	829	119			
23	DB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- Molecule 24 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			
24	DC	271	Total	C	N	O	S	0	0	0
			2083	1288	423	365	7			

- Molecule 25 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
25	DD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 26 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	DE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 27 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			
27	DF	177	Total	C	N	O	S	0	0	0
			1411	899	249	257	6			

- Molecule 28 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
28	DG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 29 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			
29	DH	149	Total	C	N	O	S	0	0	0
			1110	699	197	213	1			

- Molecule 30 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
30	DI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 31 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
31	DJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 32 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			
32	DK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			

- Molecule 33 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
33	DL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 34 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
34	DM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 35 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			
35	DN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			

- Molecule 36 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BO	116	Total	C	N	O	0	0	0
			892	552	178	162			
36	DO	116	Total	C	N	O	0	0	0
			892	552	178	162			

- Molecule 37 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
37	DP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 38 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	BQ	117	Total	C	N	O	0	0	0
			947	604	192	151			
38	DQ	117	Total	C	N	O	0	0	0
			947	604	192	151			

- Molecule 39 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
39	DR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 40 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
40	DS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			
41	DT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			

- Molecule 42 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	BU	102	Total	C	N	O	0	0	0
			780	492	146	142			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	DU	102	Total	C	N	O	0	0	0
			780	492	146	142			

- Molecule 43 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			
43	DV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 44 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BW	76	Total	C	N	O	S	0	0	0
			580	359	117	103	1			
44	DW	75	Total	C	N	O	S	0	0	0
			569	353	113	102	1			

- Molecule 45 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
45	DX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
46	DY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
47	DZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
48	D0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	B1	50	Total	C	N	O	0	0	0
			410	263	75	72			
49	D1	50	Total	C	N	O	0	0	0
			410	263	75	72			

- Molecule 50 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
50	D2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
51	D3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 52 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
52	D4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

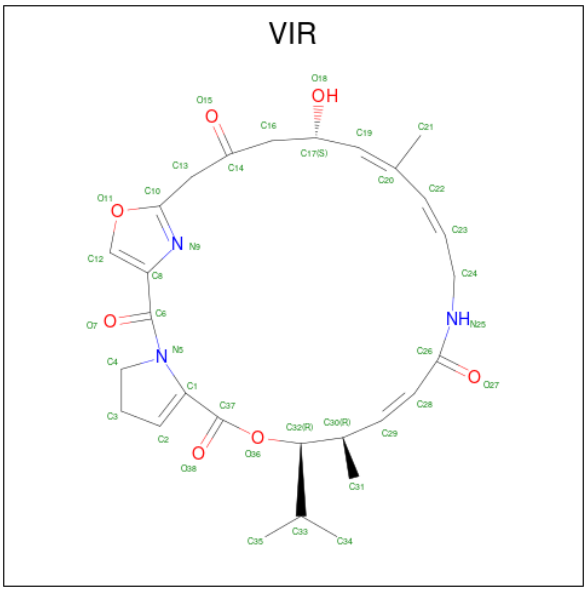
- Molecule 53 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
53	B5	191	Total 1142	C 691	N 221	O 230	0	0	1

- Molecule 54 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	AA	71	Total 71	Mg 71	0	0
54	AN	1	Total 1	Mg 1	0	0
54	BA	193	Total 193	Mg 193	0	0
54	BB	4	Total 4	Mg 4	0	0
54	BD	1	Total 1	Mg 1	0	0
54	BQ	1	Total 1	Mg 1	0	0
54	CA	56	Total 56	Mg 56	0	0
54	DA	166	Total 166	Mg 166	0	0
54	DB	3	Total 3	Mg 3	0	0
54	DQ	1	Total 1	Mg 1	0	0
54	D2	1	Total 1	Mg 1	0	0

- Molecule 55 is VIRGINIAMYCIN M1 (CCD ID: VIR) (formula: $C_{28}H_{35}N_3O_7$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	BA	1	Total C N O 38 28 3 7	0	0
55	DA	1	Total C N O 38 28 3 7	0	0

- Molecule 56 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	B4	1	Total Zn 1 1	0	0
56	D4	1	Total Zn 1 1	0	0

- Molecule 57 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AA	192	Total O 192 192	0	0
57	AL	2	Total O 2 2	0	0
57	AN	6	Total O 6 6	0	0
57	AT	2	Total O 2 2	0	0
57	AU	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	BA	620	Total O 620 620	0	0
57	BB	13	Total O 13 13	0	0
57	BC	7	Total O 7 7	0	0
57	BD	3	Total O 3 3	0	0
57	BE	4	Total O 4 4	0	0
57	BF	1	Total O 1 1	0	0
57	BJ	1	Total O 1 1	0	0
57	BL	5	Total O 5 5	0	0
57	BN	3	Total O 3 3	0	0
57	BQ	1	Total O 1 1	0	0
57	BS	1	Total O 1 1	0	0
57	BT	1	Total O 1 1	0	0
57	BV	1	Total O 1 1	0	0
57	B2	1	Total O 1 1	0	0
57	B3	2	Total O 2 2	0	0
57	B4	2	Total O 2 2	0	0
57	CA	191	Total O 191 191	0	0
57	CL	1	Total O 1 1	0	0
57	CN	2	Total O 2 2	0	0
57	CT	2	Total O 2 2	0	0
57	CU	2	Total O 2 2	0	0

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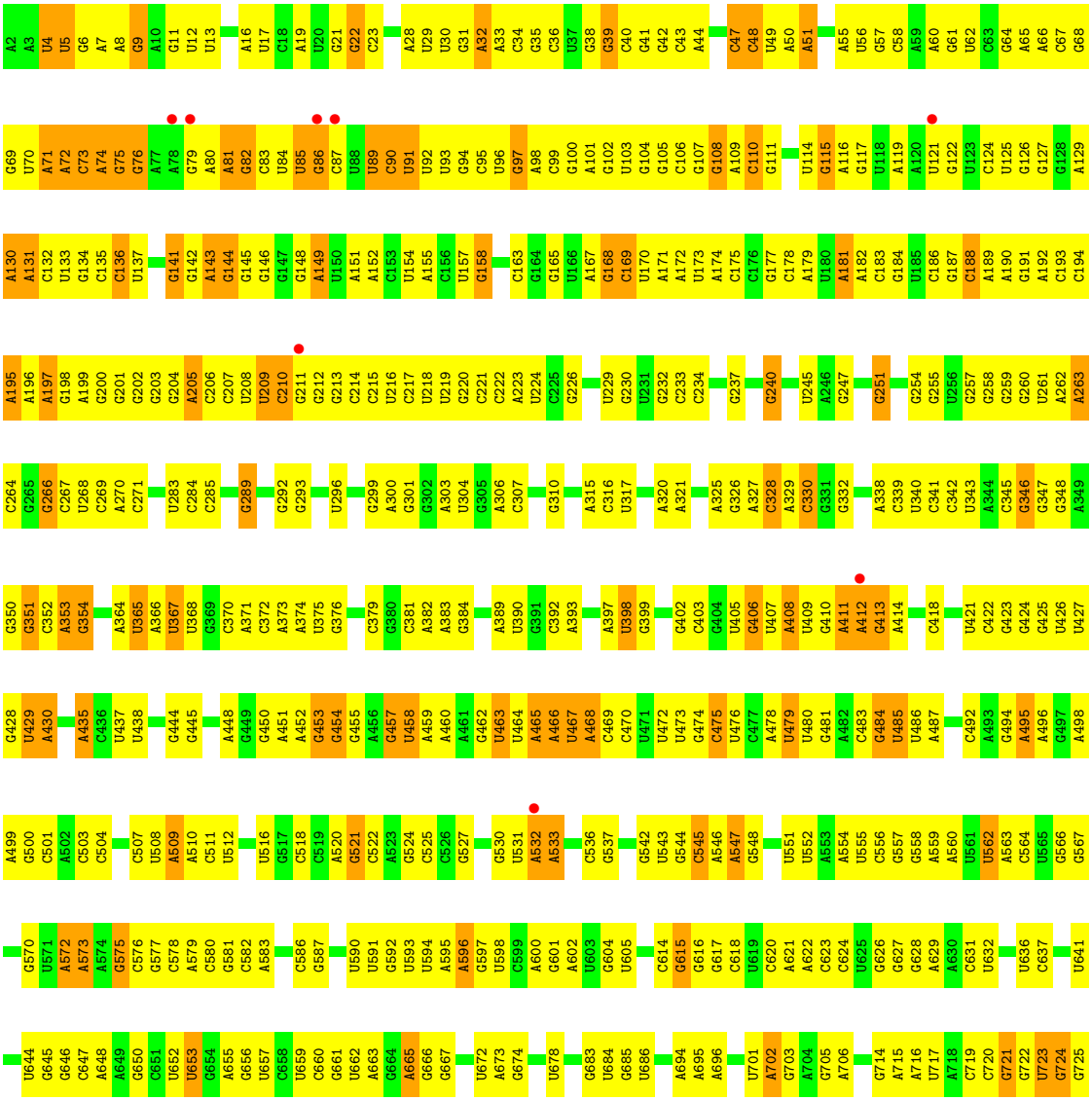
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	DA	607	Total O 607 607	0	0
57	DB	13	Total O 13 13	0	0
57	DC	12	Total O 12 12	0	0
57	DD	4	Total O 4 4	0	0
57	DE	6	Total O 6 6	0	0
57	DJ	1	Total O 1 1	0	0
57	DL	4	Total O 4 4	0	0
57	DN	2	Total O 2 2	0	0
57	DT	1	Total O 1 1	0	0
57	DU	1	Total O 1 1	0	0
57	DV	1	Total O 1 1	0	0
57	D2	1	Total O 1 1	0	0
57	D3	2	Total O 2 2	0	0
57	D4	1	Total O 1 1	0	0

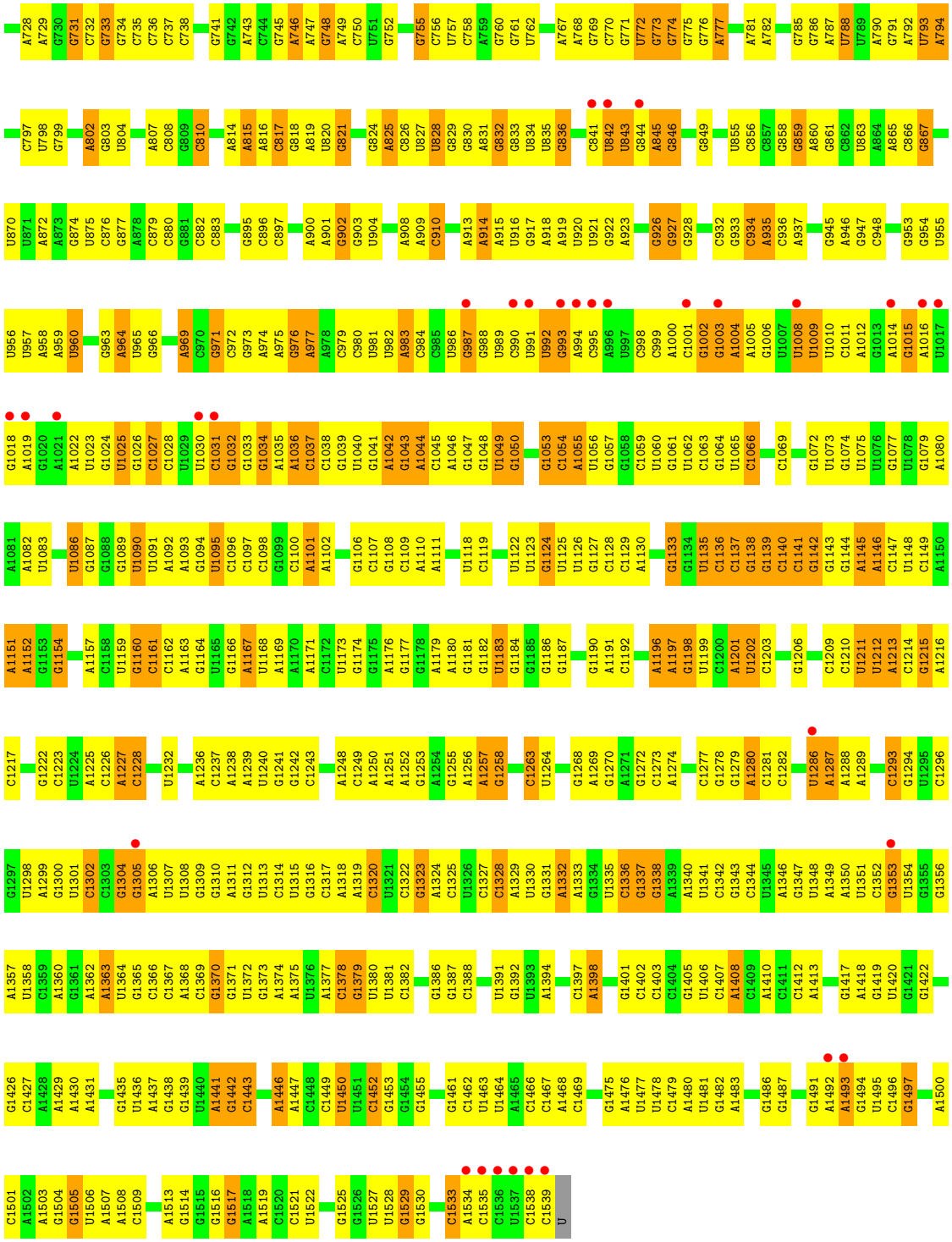
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 16S rRNA

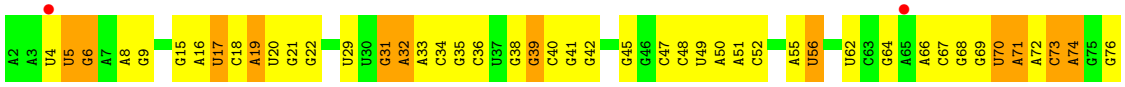
Chain AA:

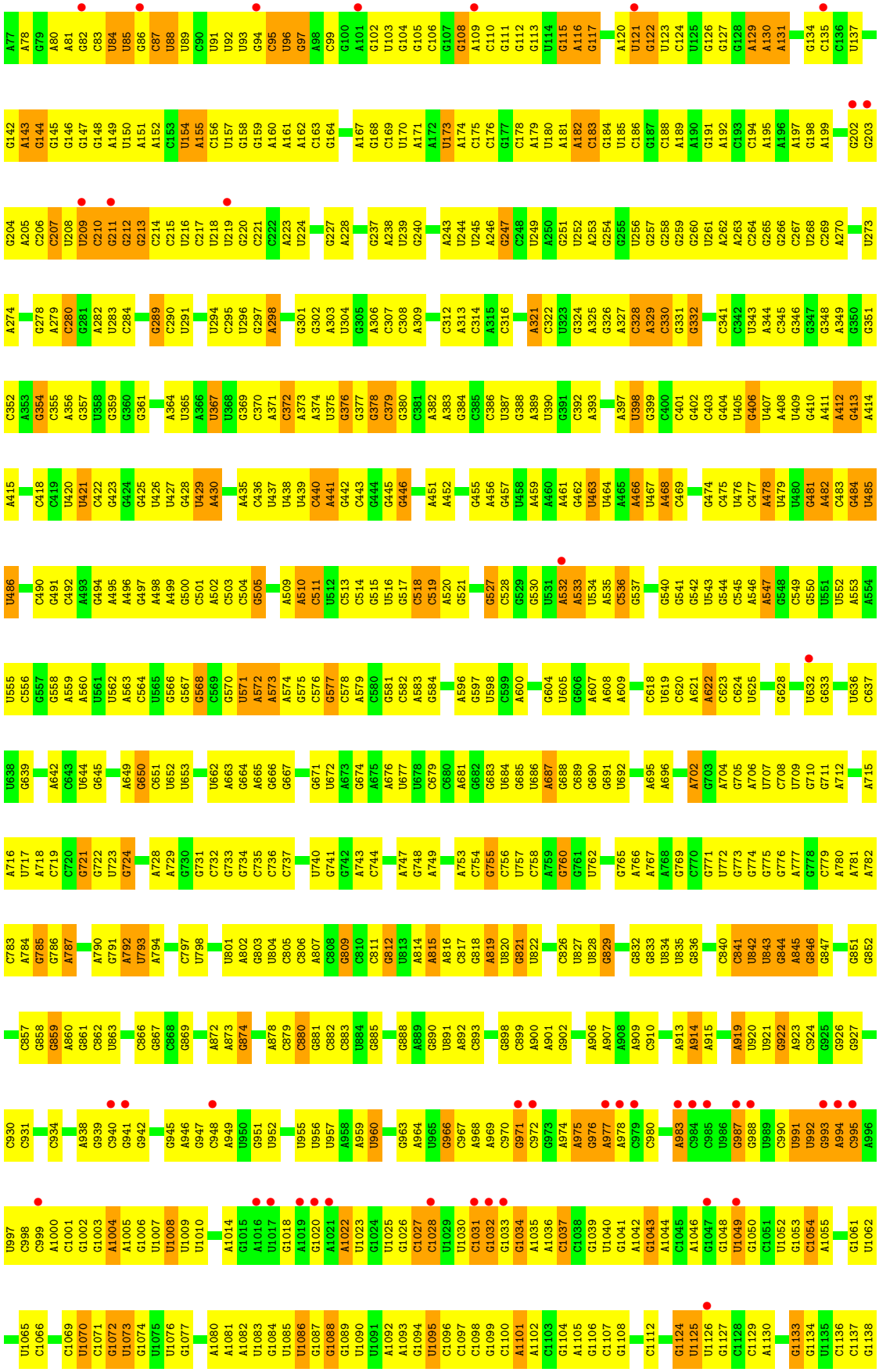


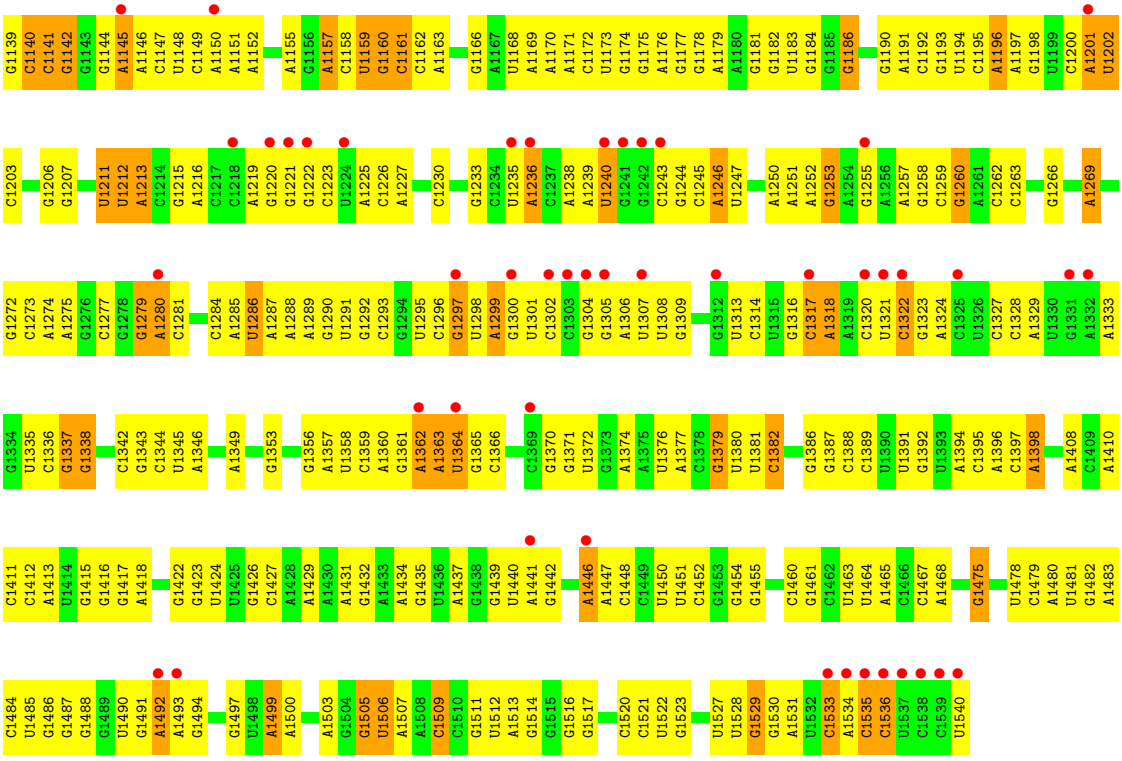


• Molecule 1: 16S rRNA

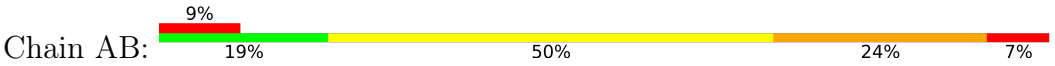
Chain CA:

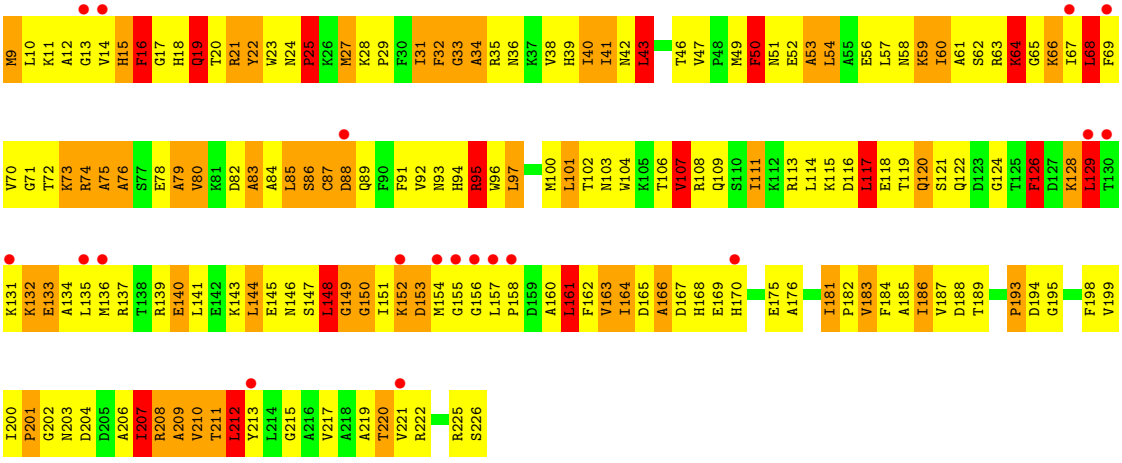




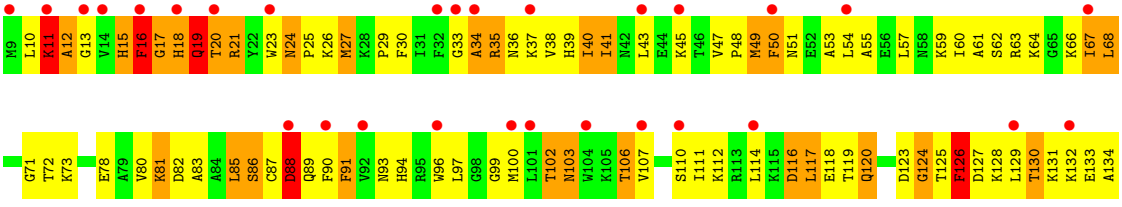


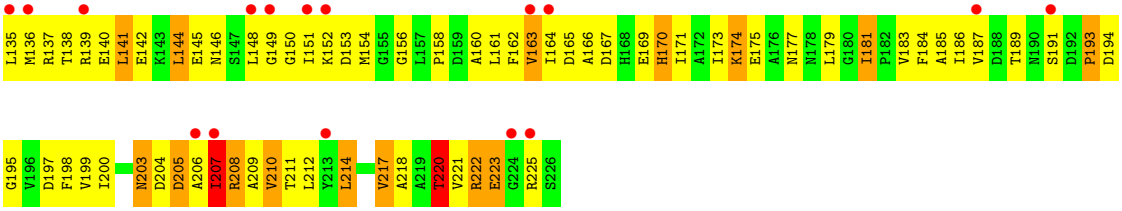
• Molecule 2: 30S ribosomal protein S2





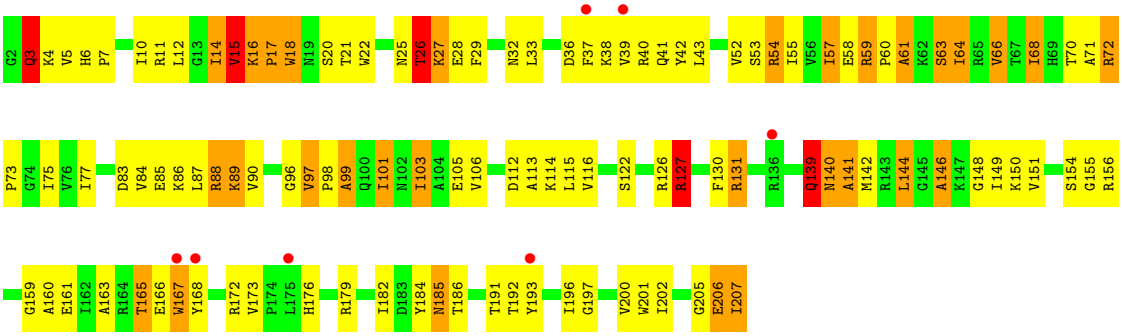
• Molecule 2: 30S ribosomal protein S2





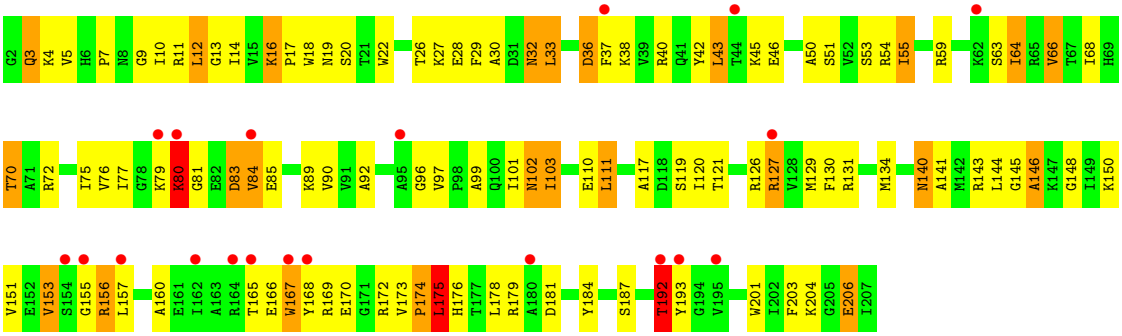
• Molecule 3: 30S ribosomal protein S3

Chain AC:



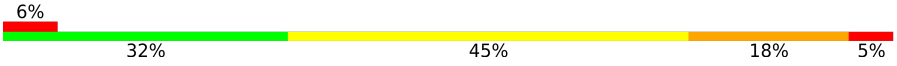
• Molecule 3: 30S ribosomal protein S3

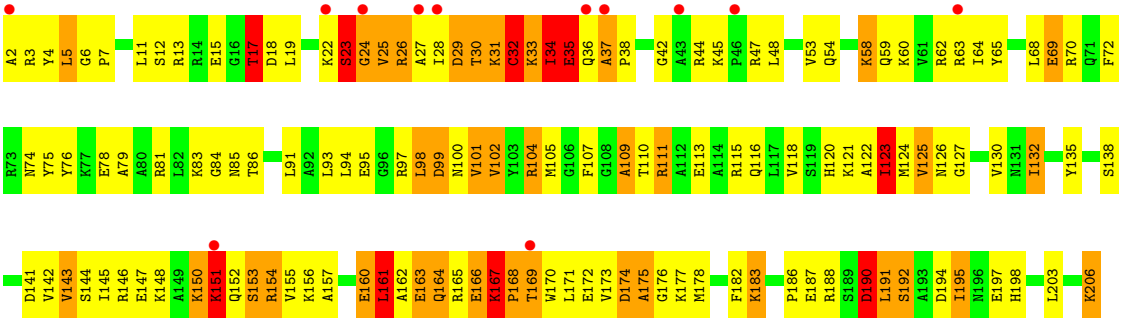
Chain CC:



• Molecule 4: 30S ribosomal protein S4

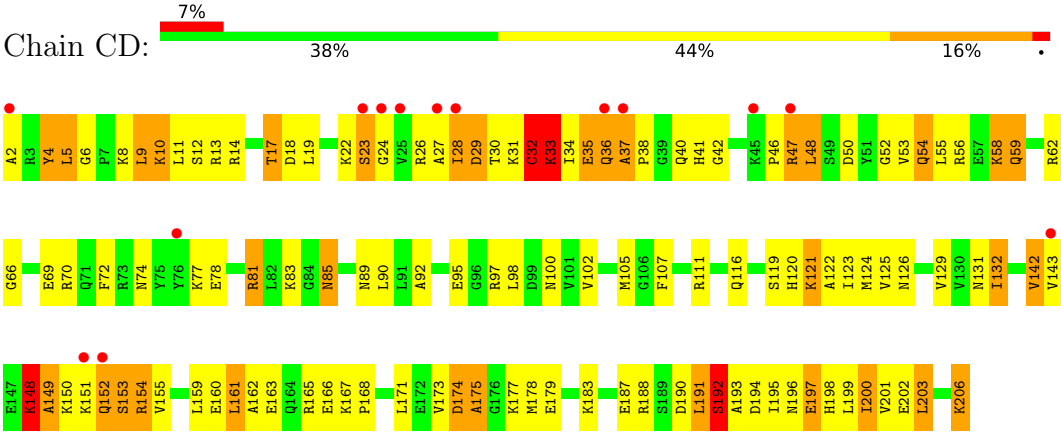
Chain AD:





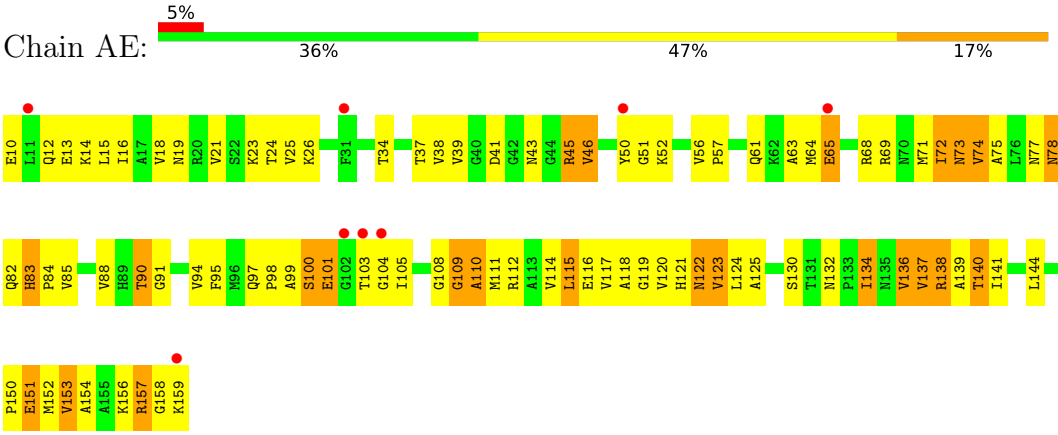
• Molecule 4: 30S ribosomal protein S4

Chain CD:



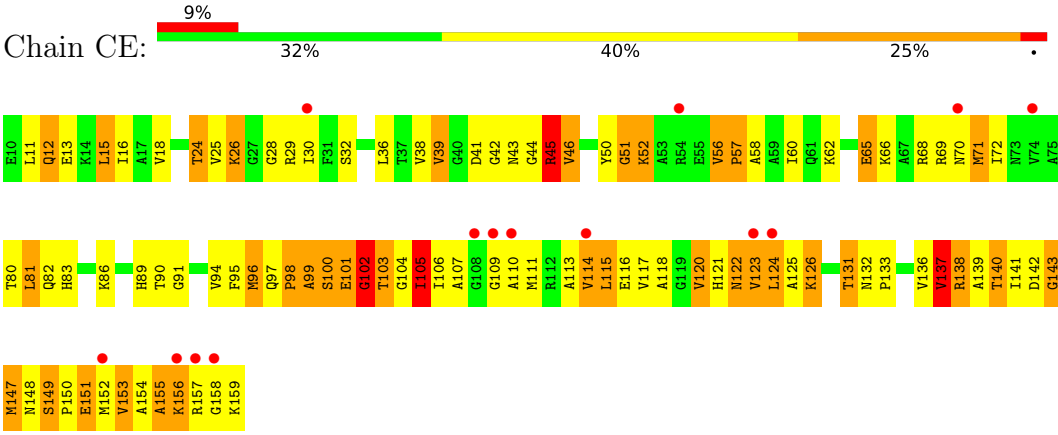
• Molecule 5: 30S ribosomal protein S5

Chain AE:



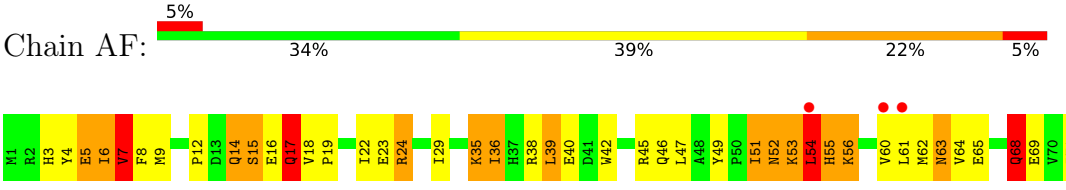
• Molecule 5: 30S ribosomal protein S5

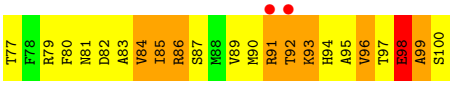
Chain CE:



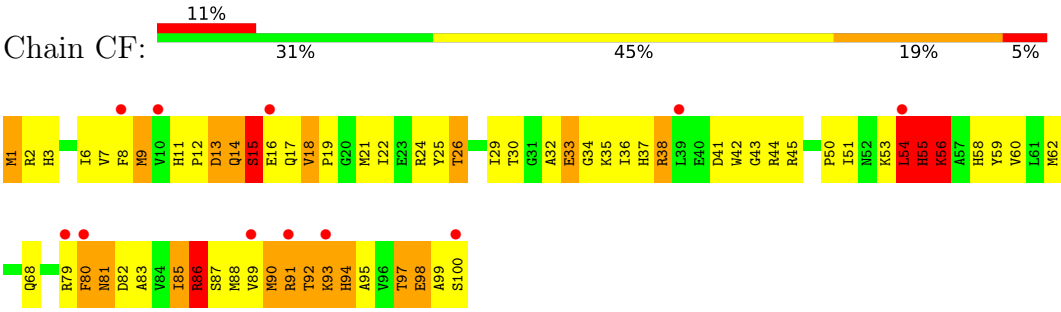
• Molecule 6: 30S ribosomal protein S6

Chain AF:

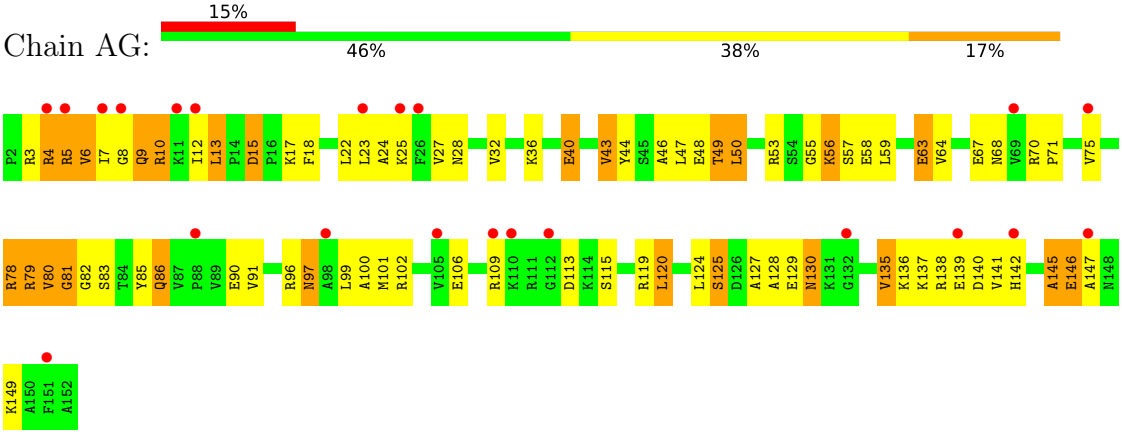




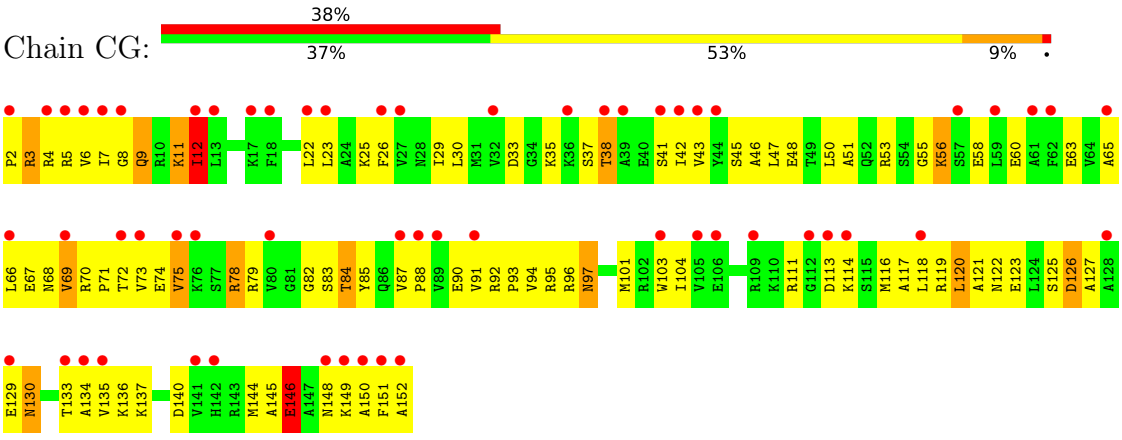
• Molecule 6: 30S ribosomal protein S6



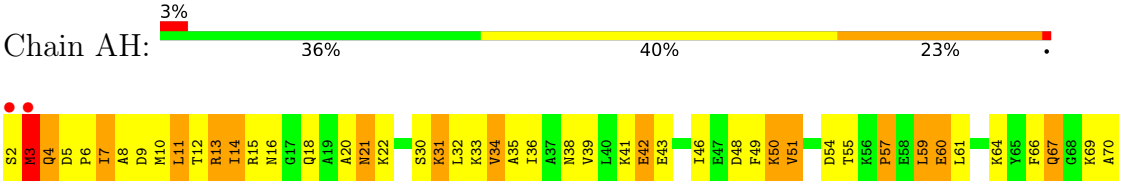
• Molecule 7: 30S ribosomal protein S7

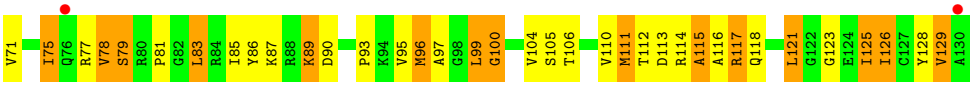


• Molecule 7: 30S ribosomal protein S7

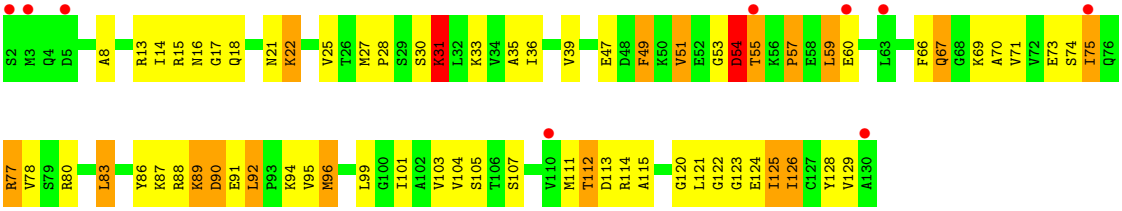


• Molecule 8: 30S ribosomal protein S8

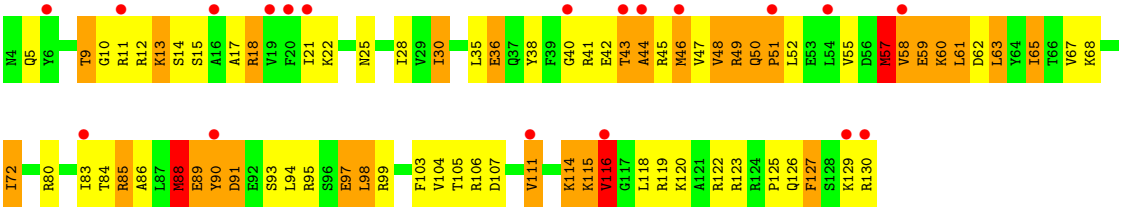




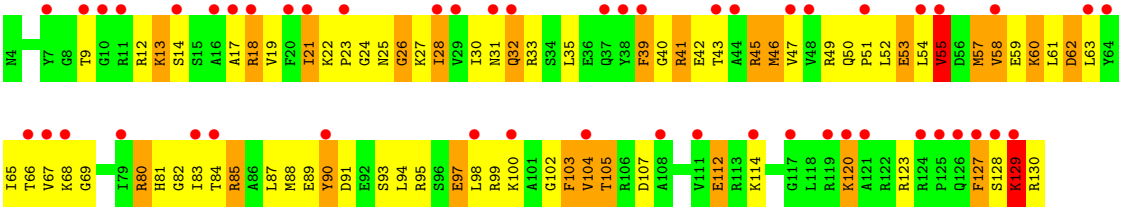
• Molecule 8: 30S ribosomal protein S8



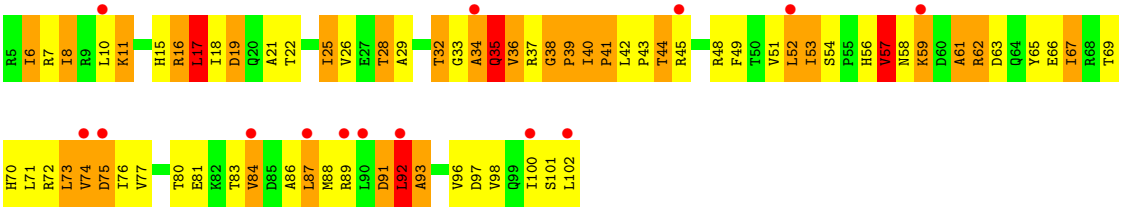
• Molecule 9: 30S ribosomal protein S9



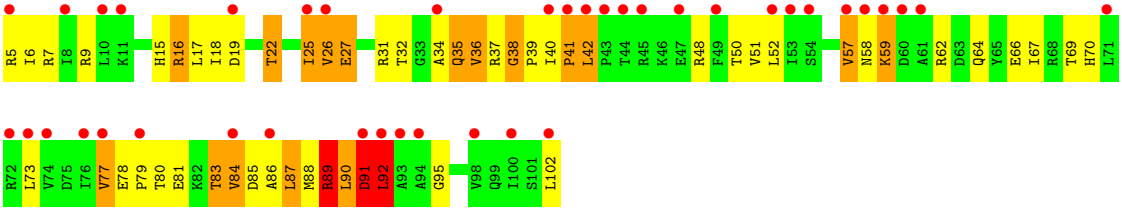
• Molecule 9: 30S ribosomal protein S9



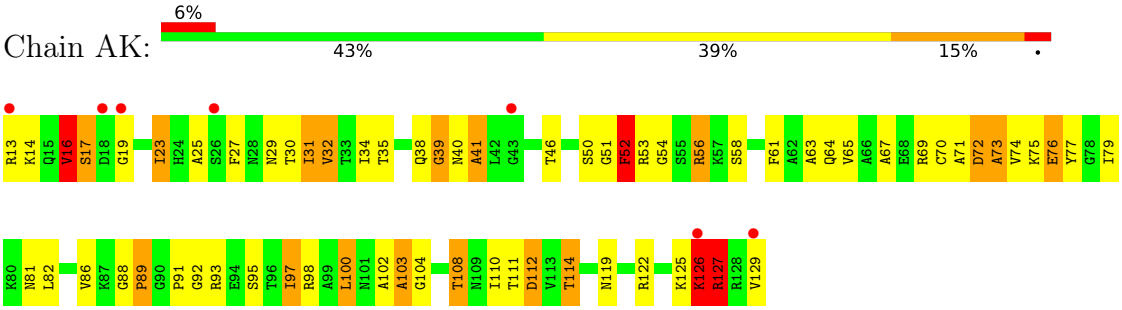
• Molecule 10: 30S ribosomal protein S10



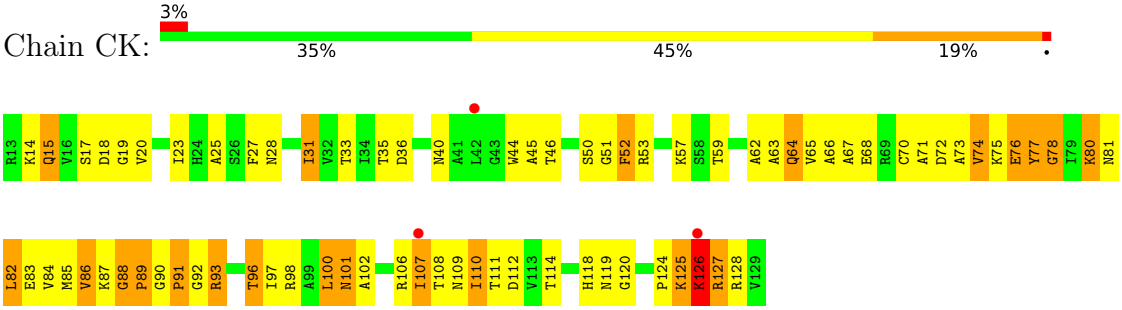
• Molecule 10: 30S ribosomal protein S10



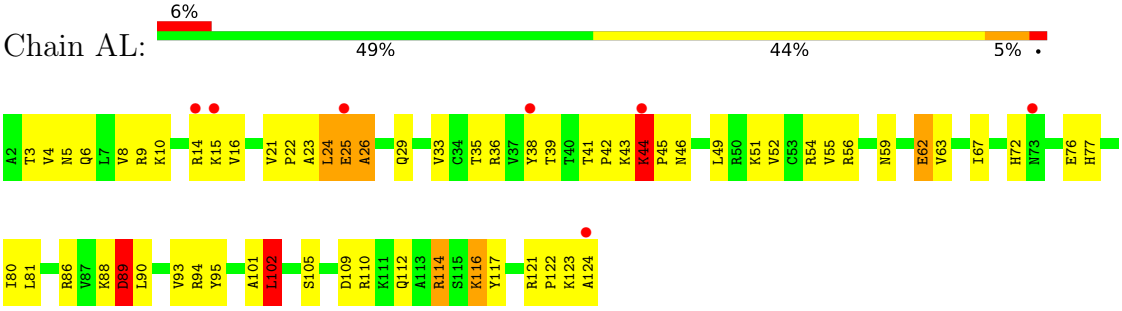
• Molecule 11: 30S ribosomal protein S11



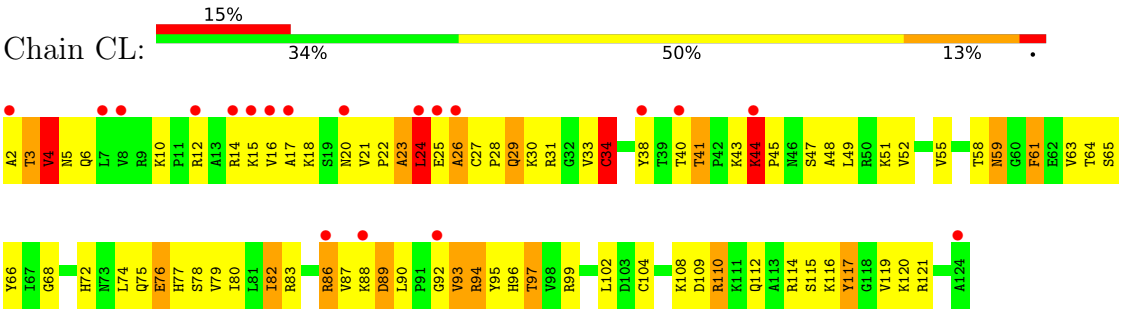
• Molecule 11: 30S ribosomal protein S11



• Molecule 12: 30S ribosomal protein S12

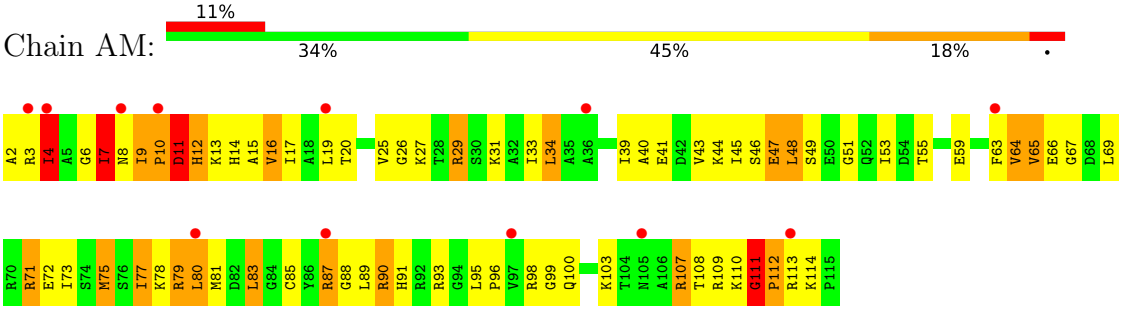


• Molecule 12: 30S ribosomal protein S12



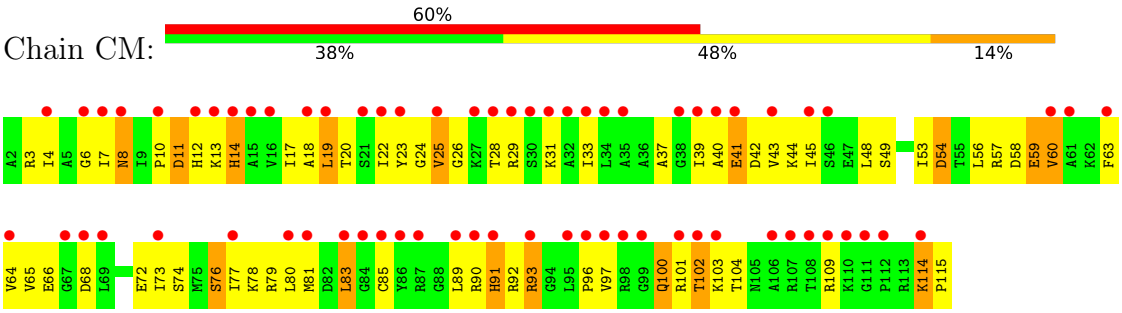
• Molecule 13: 30S ribosomal protein S13

Chain AM:



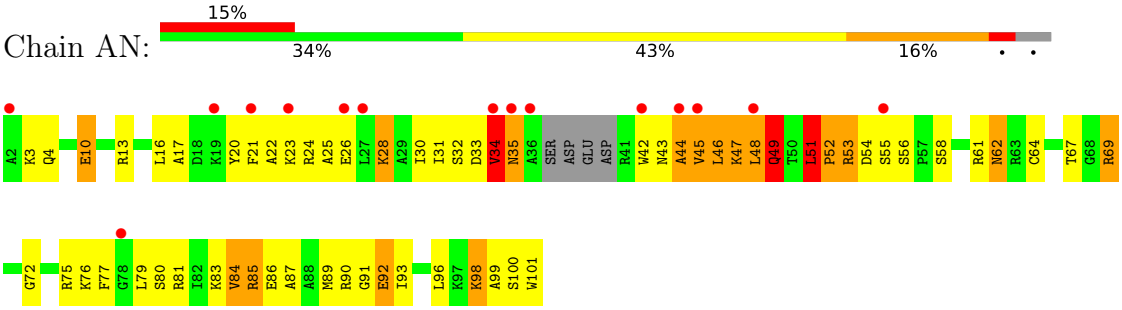
• Molecule 13: 30S ribosomal protein S13

Chain CM:



• Molecule 14: 30S ribosomal protein S14

Chain AN:



• Molecule 14: 30S ribosomal protein S14

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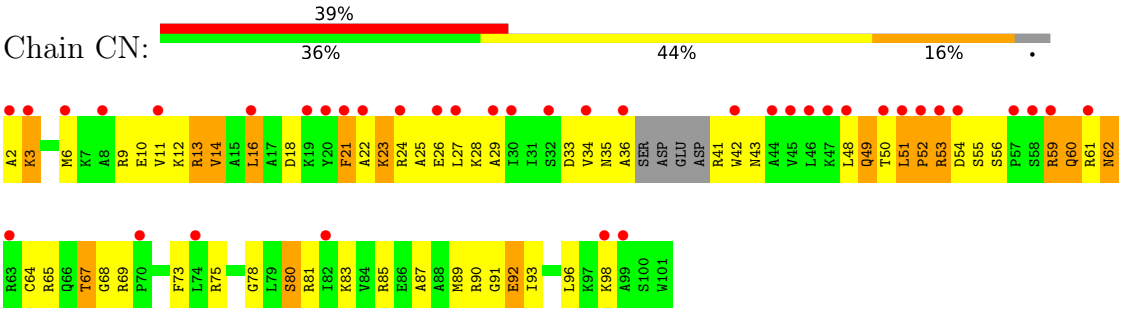

• Molecule 15: 30S ribosomal protein S15

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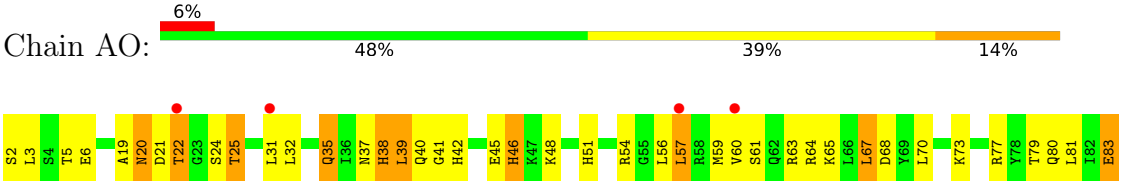
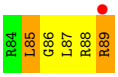
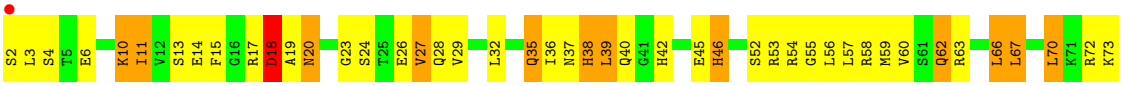
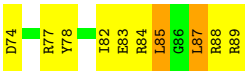




• Molecule 15: 30S ribosomal protein S15

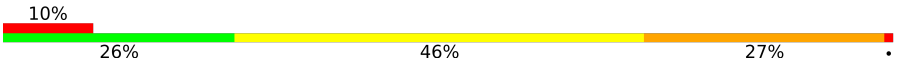
Chain CO:

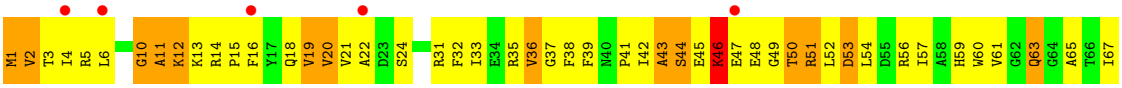


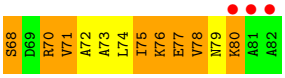


• Molecule 16: 30S ribosomal protein S16

Chain AP:

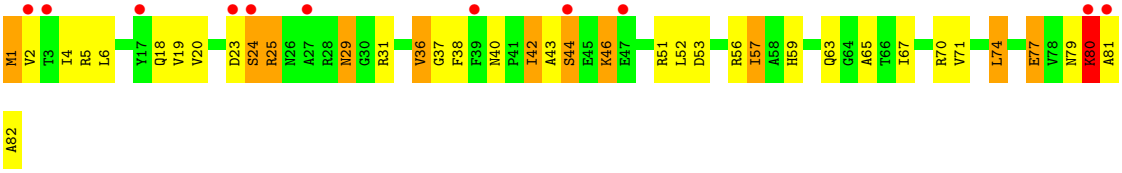






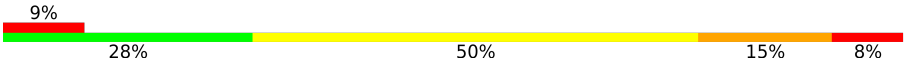
• Molecule 16: 30S ribosomal protein S16

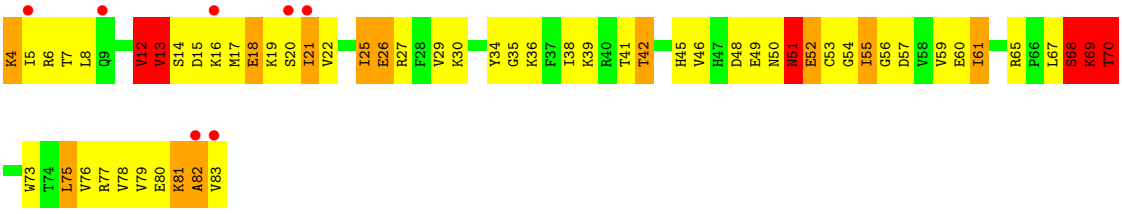
Chain CP:



• Molecule 17: 30S ribosomal protein S17

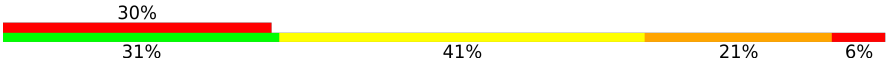
Chain AQ:

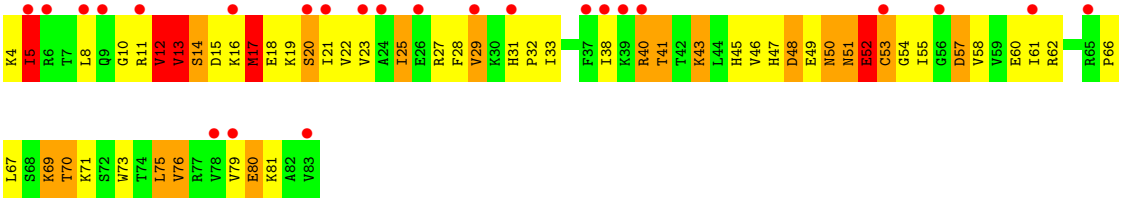




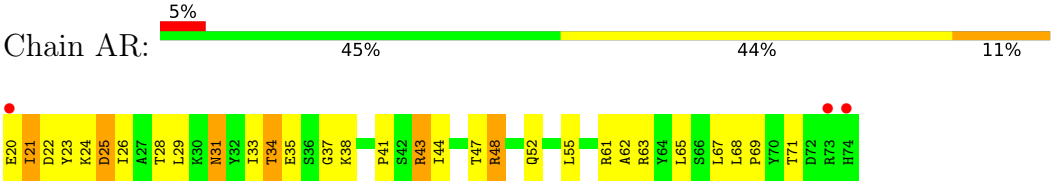
• Molecule 17: 30S ribosomal protein S17

Chain CQ:

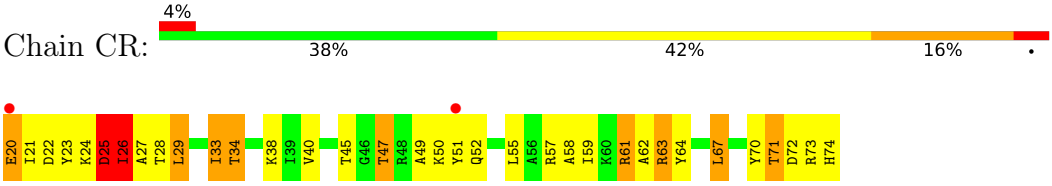




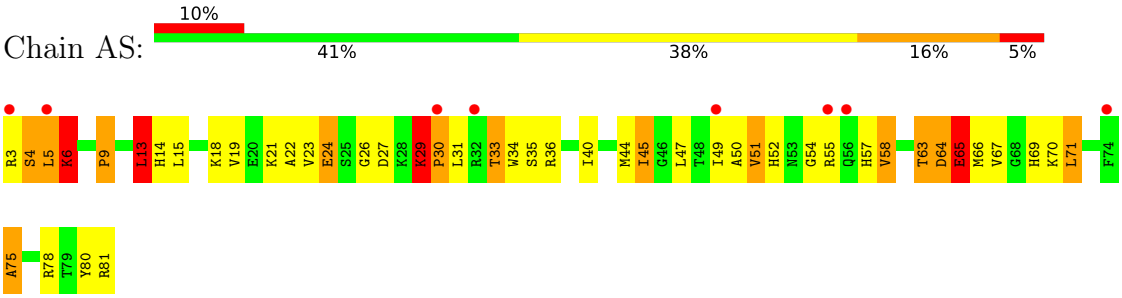
• Molecule 18: 30S ribosomal protein S18



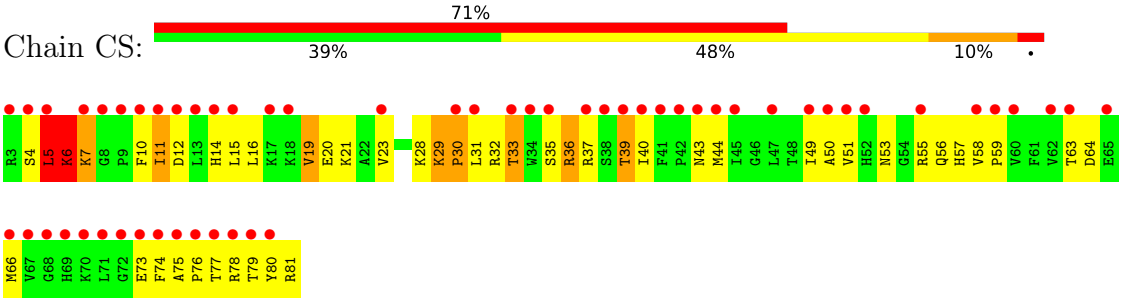
• Molecule 18: 30S ribosomal protein S18



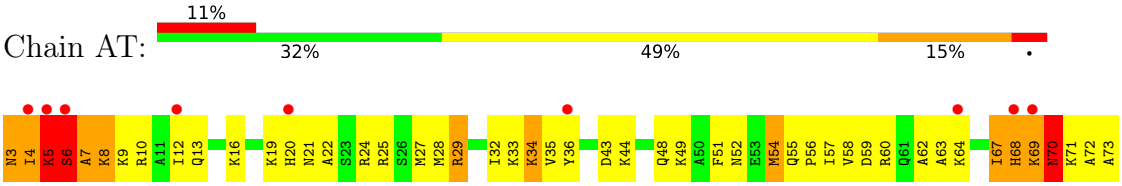
• Molecule 19: 30S ribosomal protein S19



• Molecule 19: 30S ribosomal protein S19

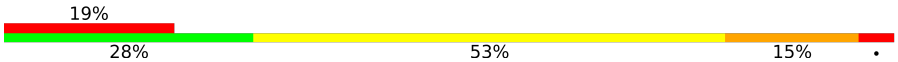


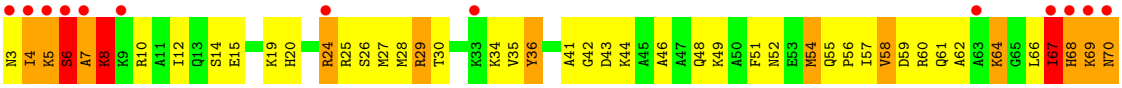
• Molecule 20: 30S ribosomal protein S20



• Molecule 20: 30S ribosomal protein S20

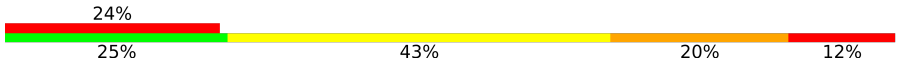
Chain CT:

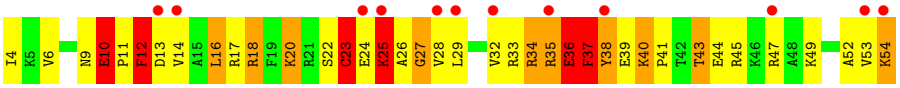




• Molecule 21: 30S ribosomal protein S21

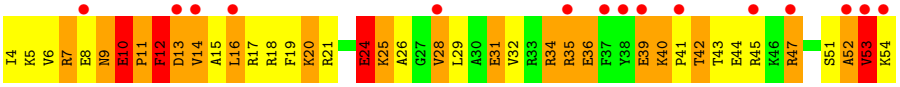
Chain AU:





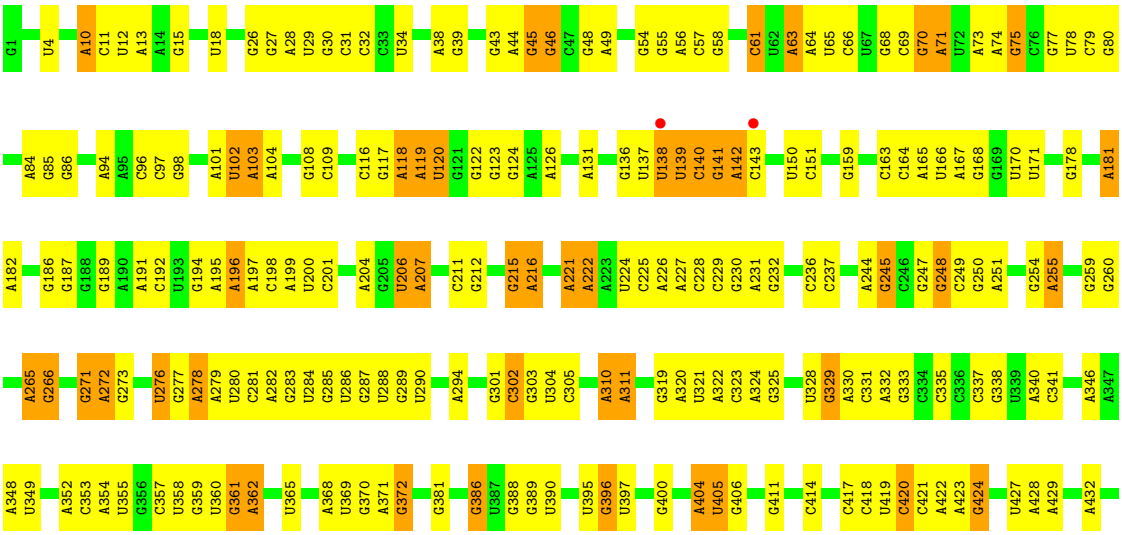
• Molecule 21: 30S ribosomal protein S21

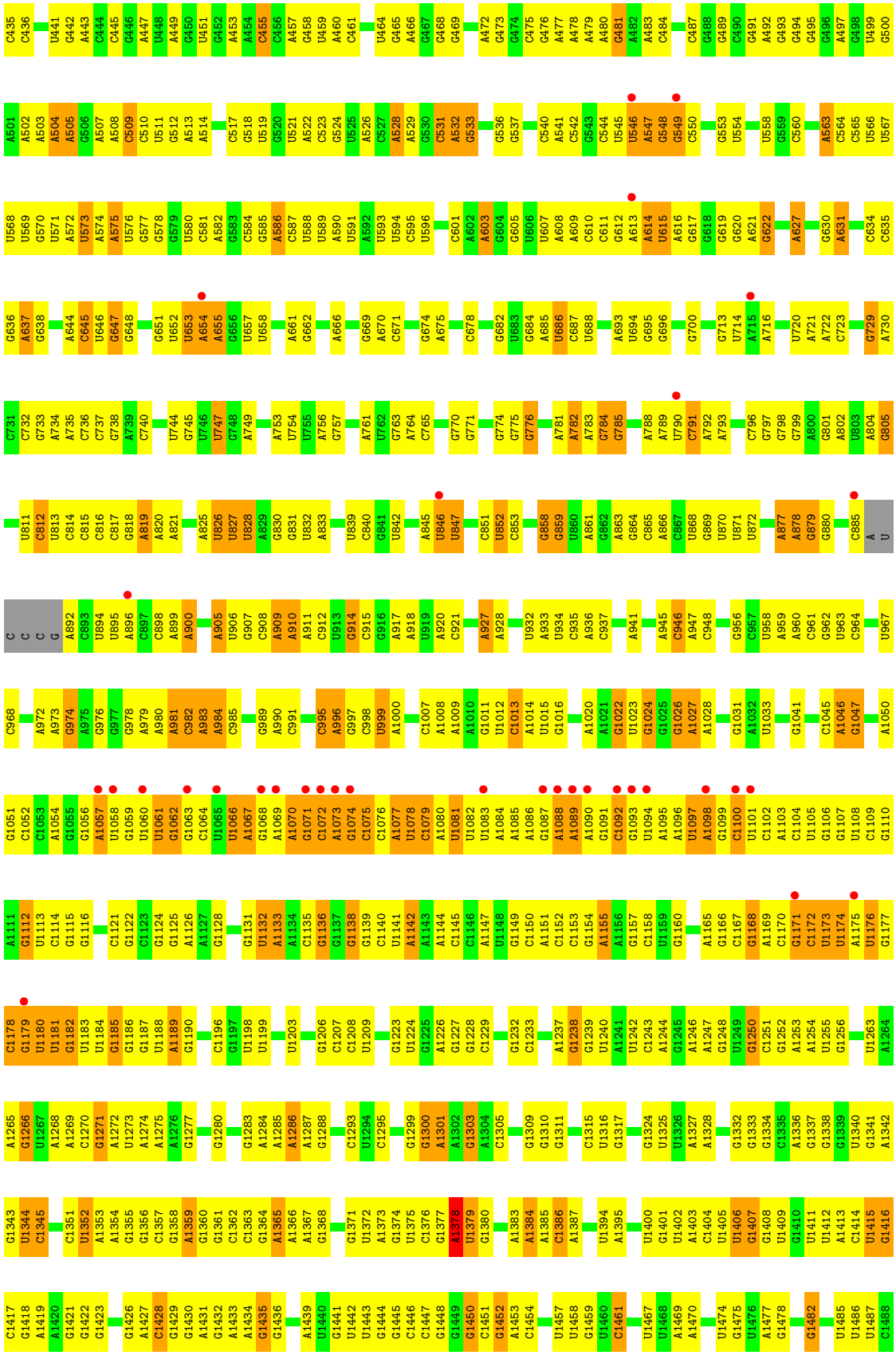
Chain CU:

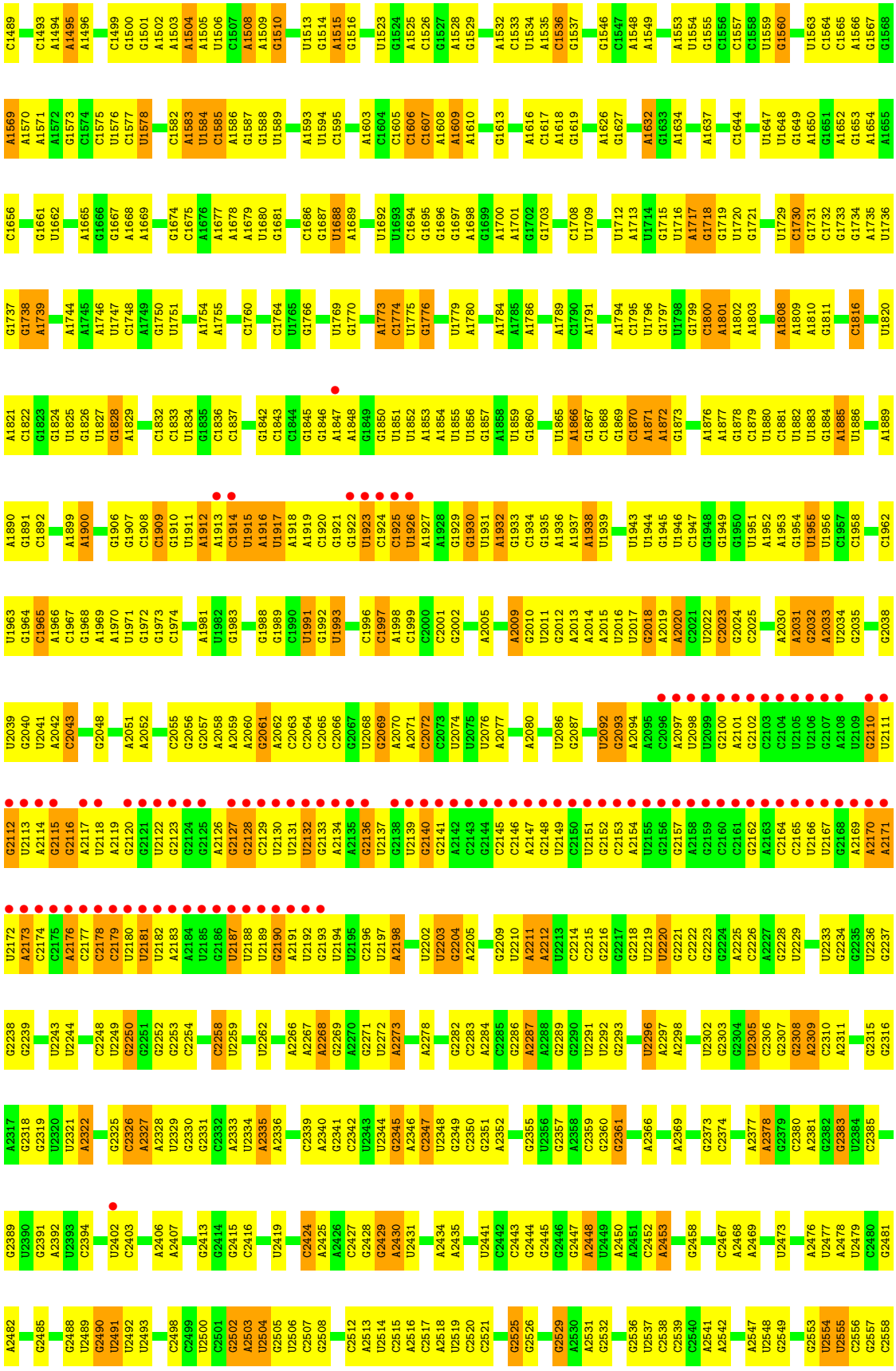


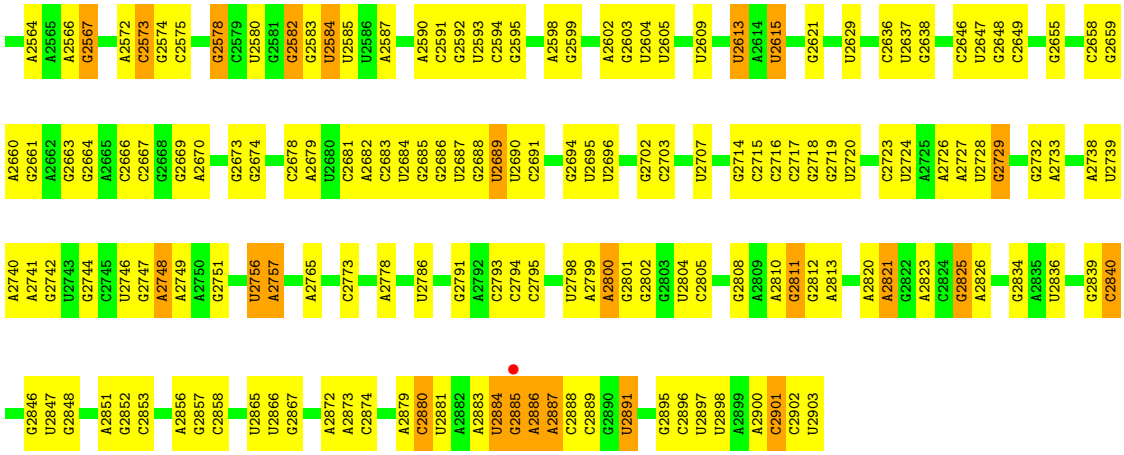
• Molecule 22: 23S rRNA

Chain BA:



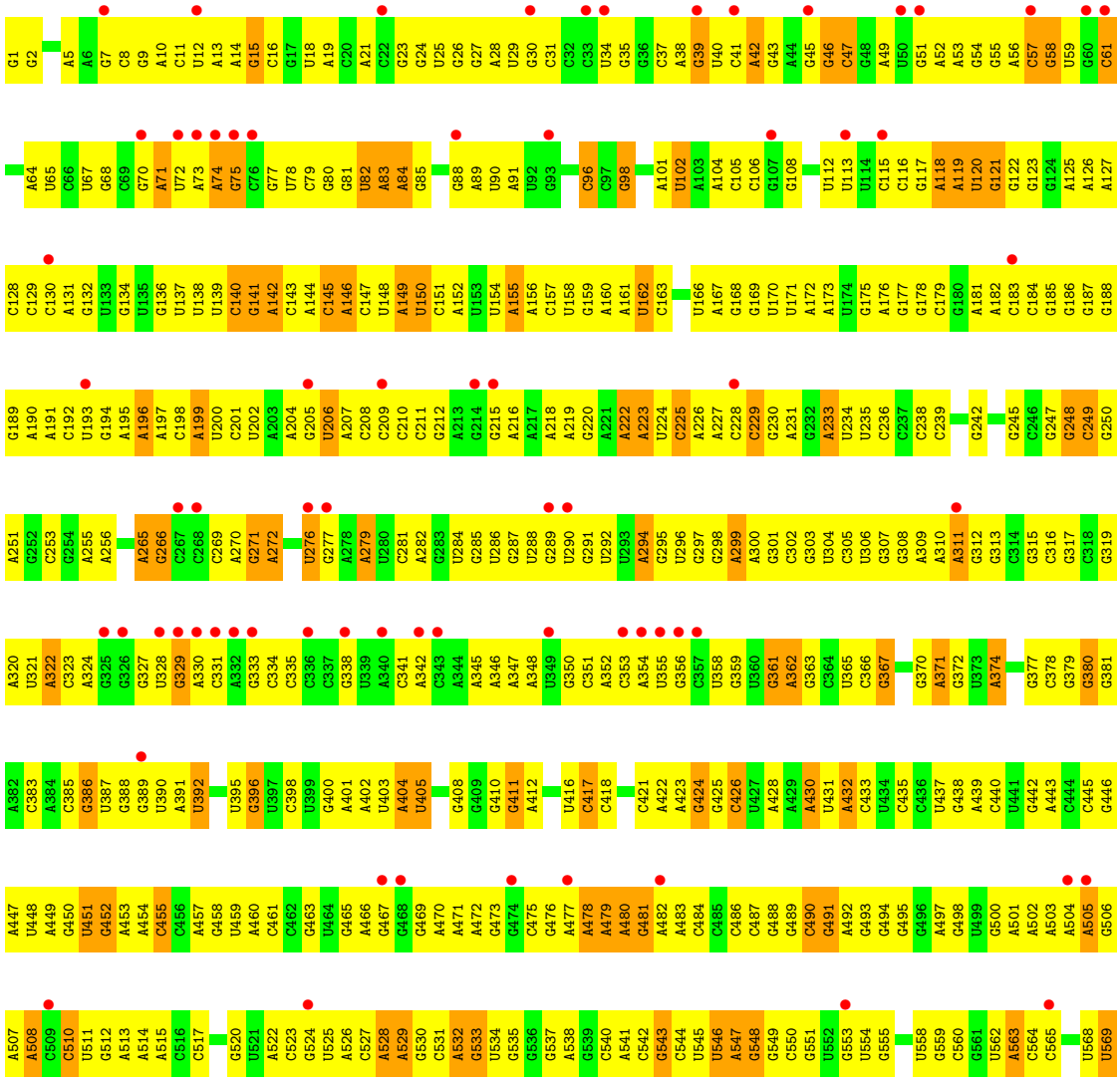


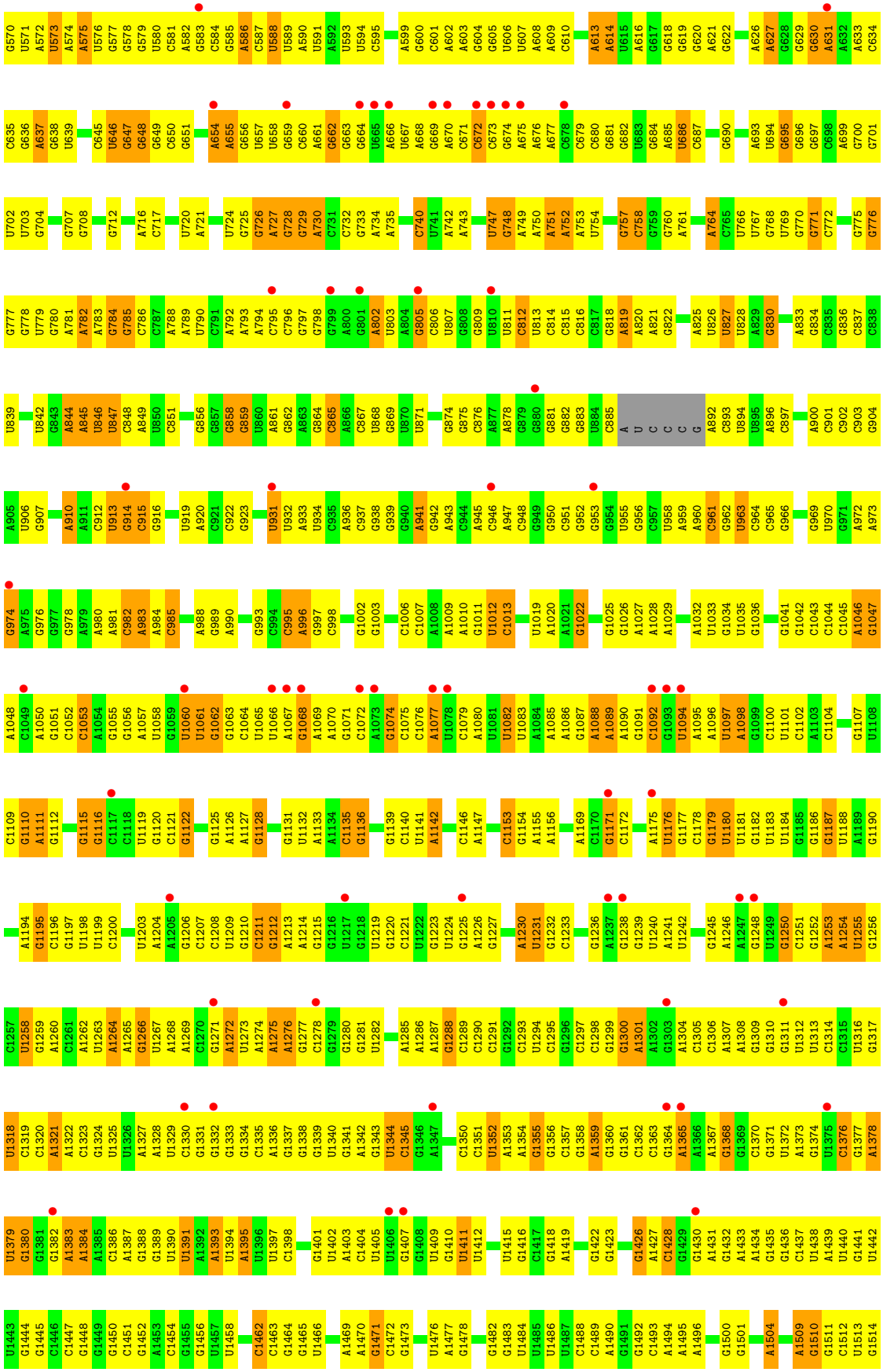


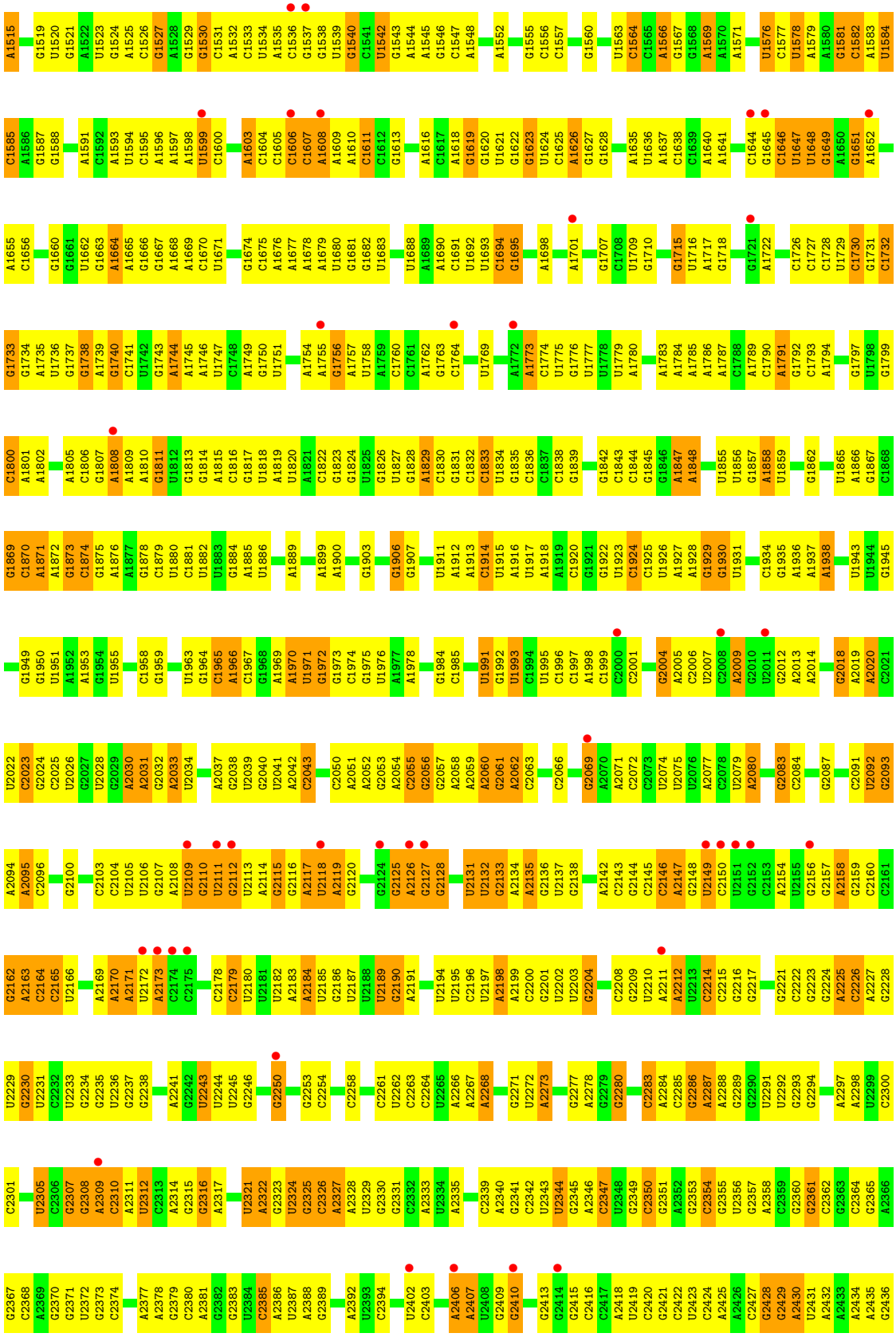


• Molecule 22: 23S rRNA

Chain DA:



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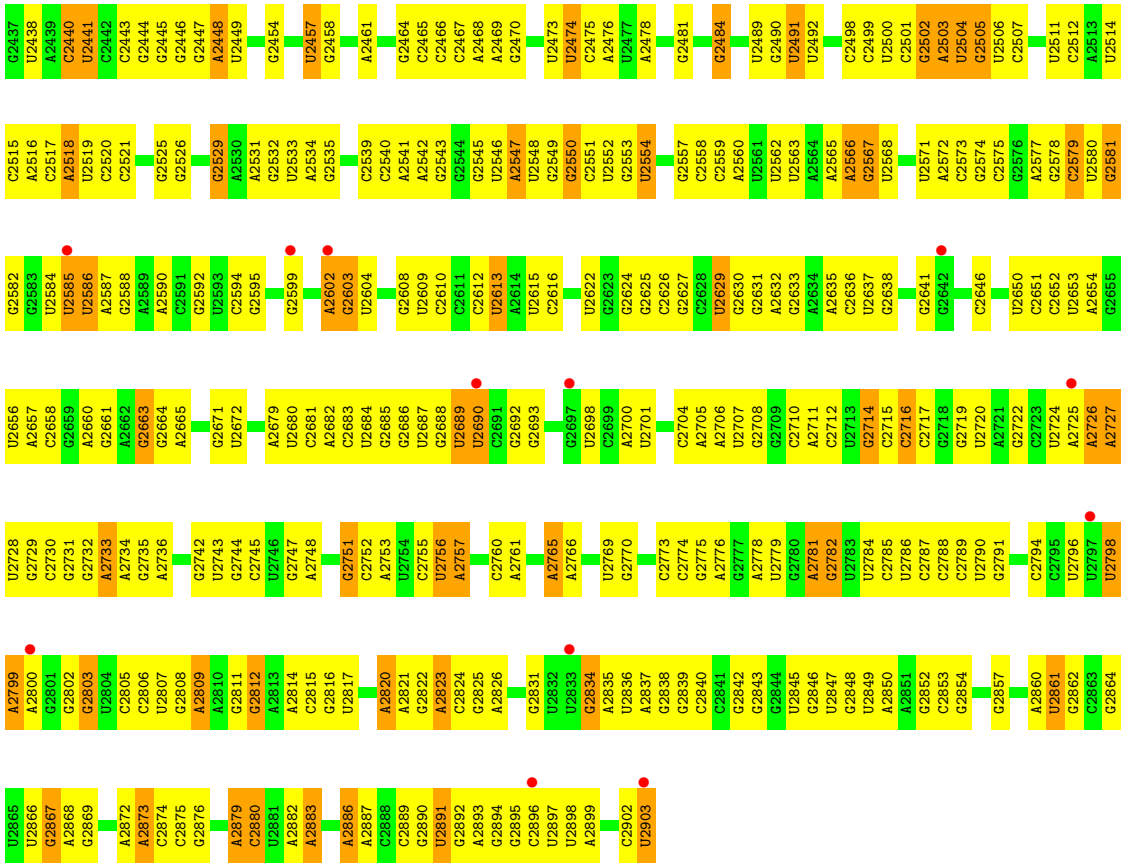
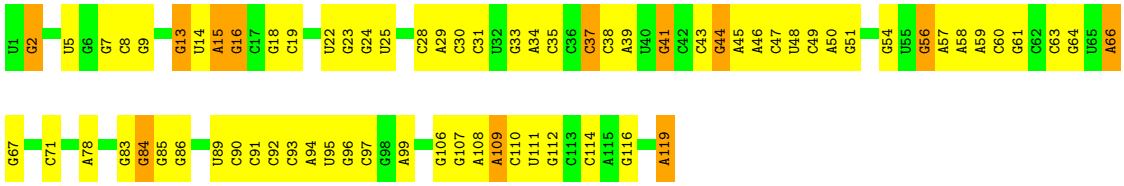


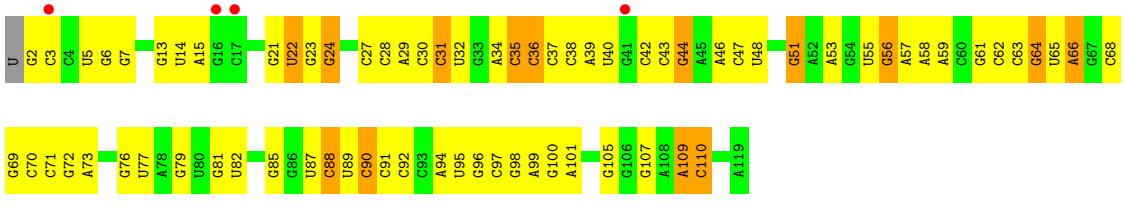
• Molecule 23: 5S rRNA

Chain BB:



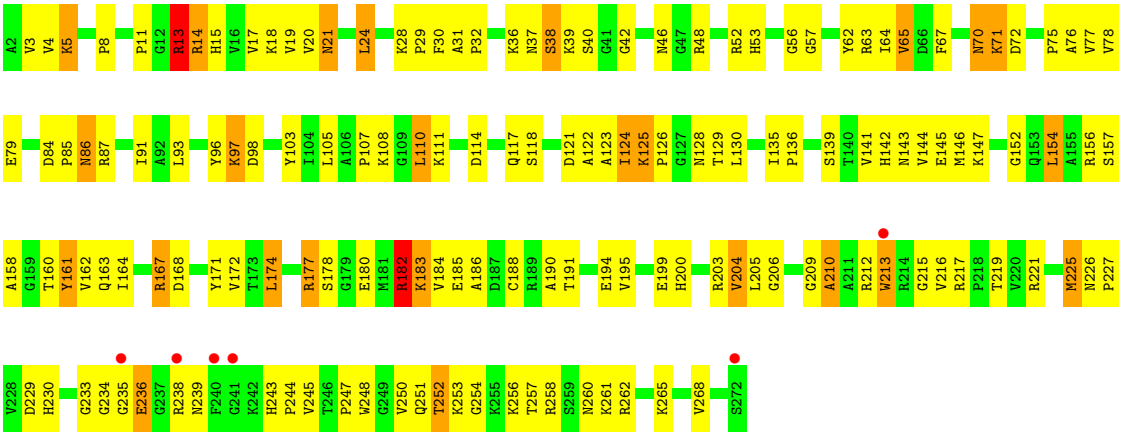
• Molecule 23: 5S rRNA

Chain DB:



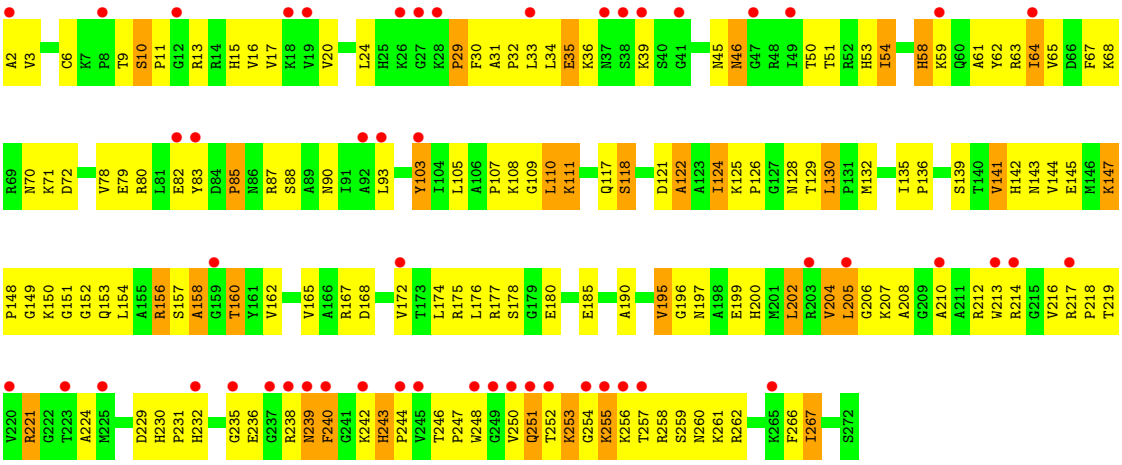
• Molecule 24: 50S ribosomal protein L2

Chain BC:



• Molecule 24: 50S ribosomal protein L2

Chain DC:

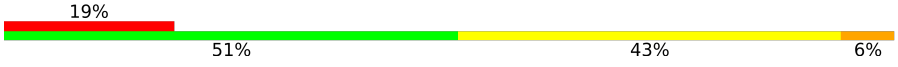


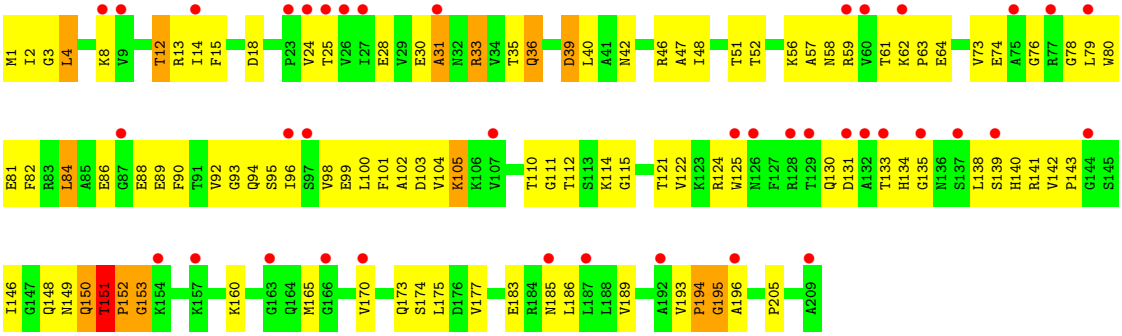
• Molecule 25: 50S ribosomal protein L3

Chain BD:

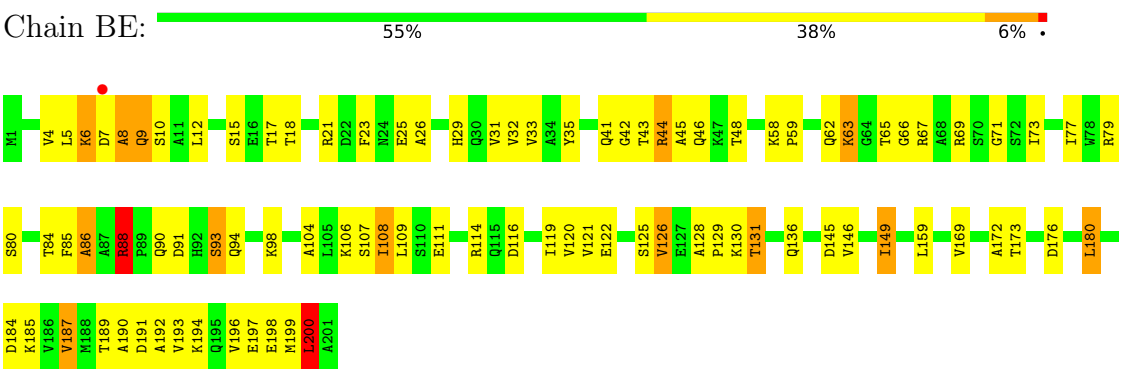
• Molecule 25: 50S ribosomal protein L3

Chain DD:

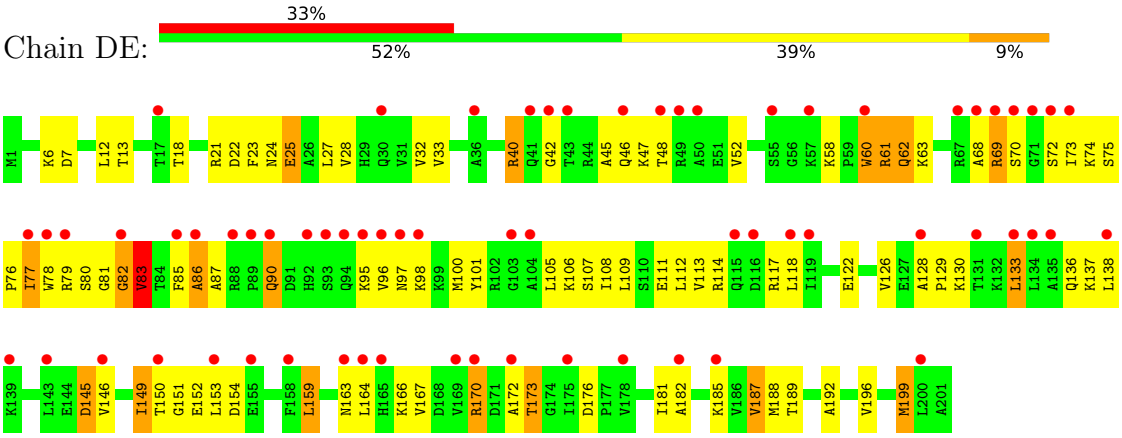




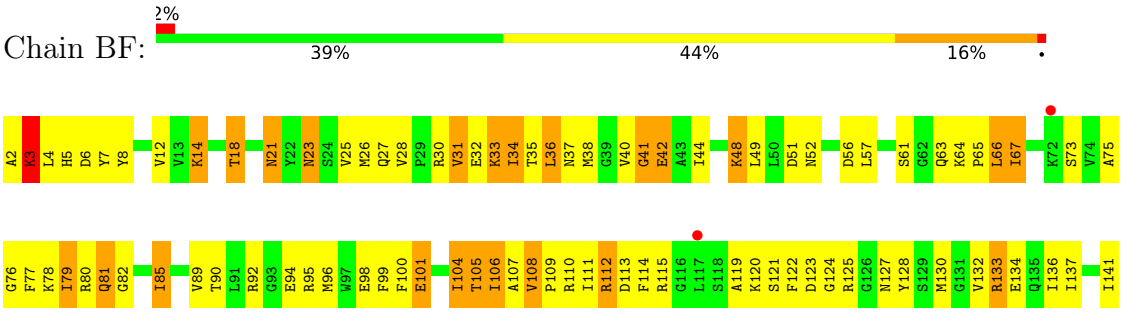
• Molecule 26: 50S ribosomal protein L4



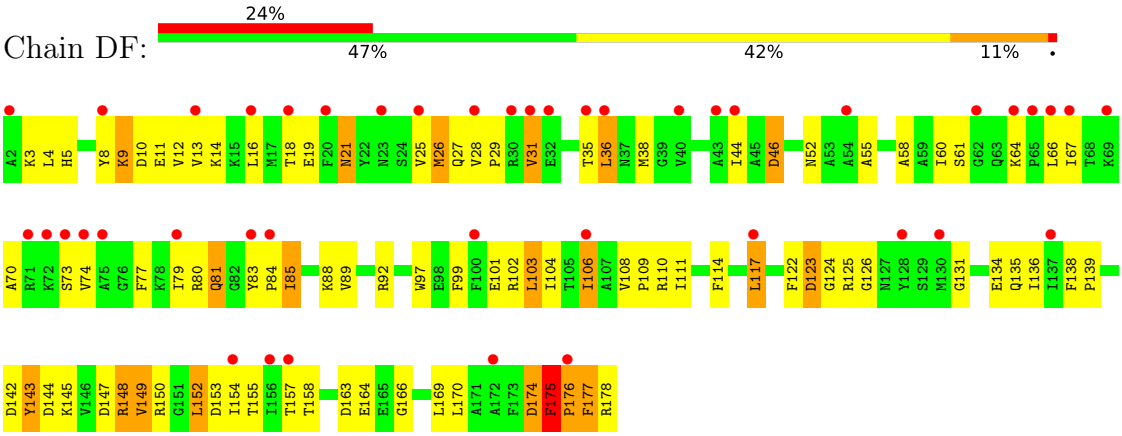
• Molecule 26: 50S ribosomal protein L4



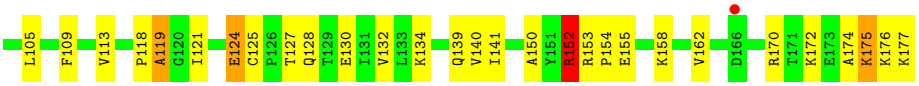
• Molecule 27: 50S ribosomal protein L5



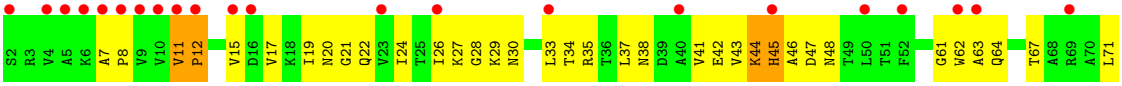
• Molecule 27: 50S ribosomal protein L5

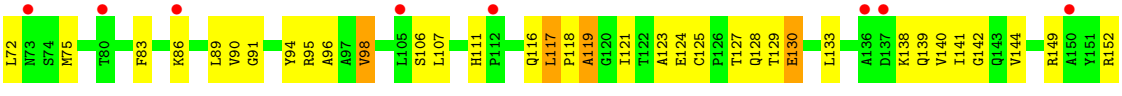


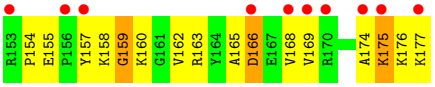
• Molecule 28: 50S ribosomal protein L6



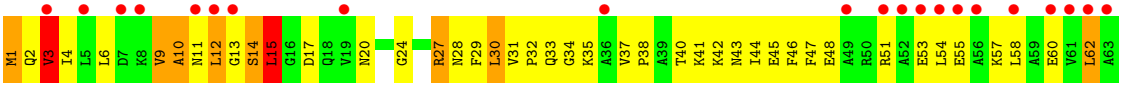
• Molecule 28: 50S ribosomal protein L6

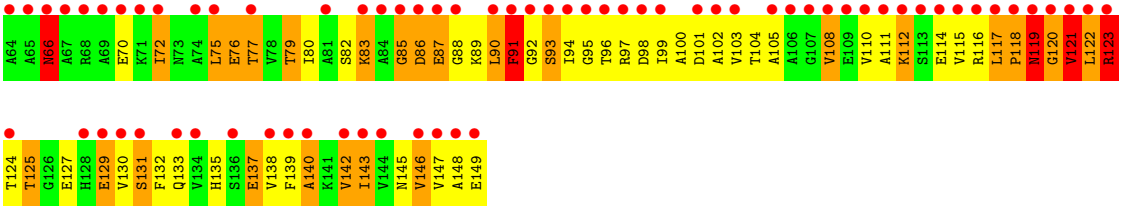






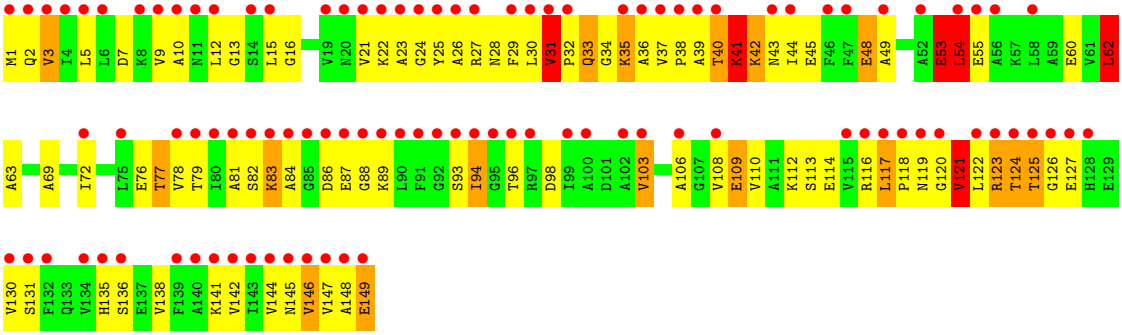
• Molecule 29: 50S ribosomal protein L9





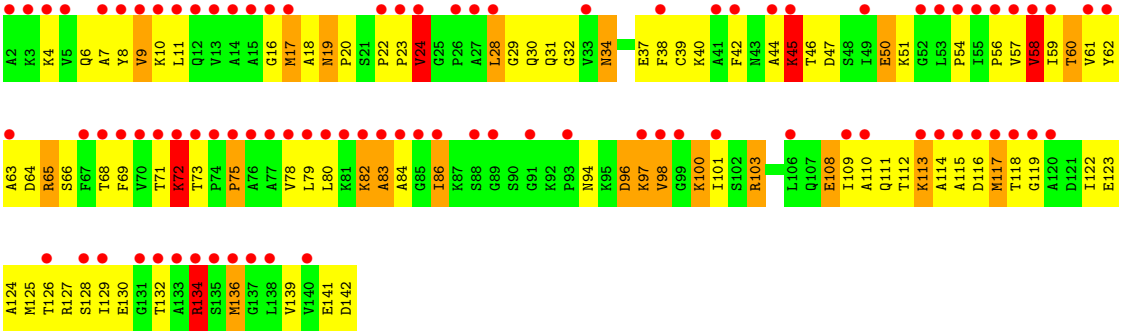
• Molecule 29: 50S ribosomal protein L9

Chain DH:



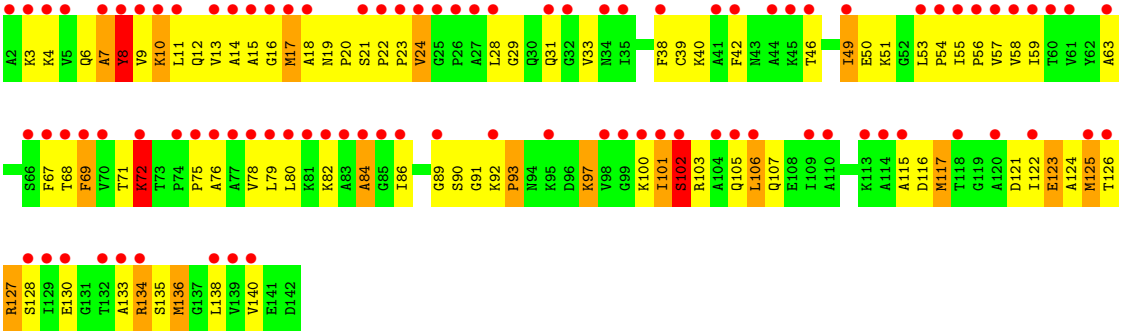
• Molecule 30: 50S ribosomal protein L11

Chain BI:



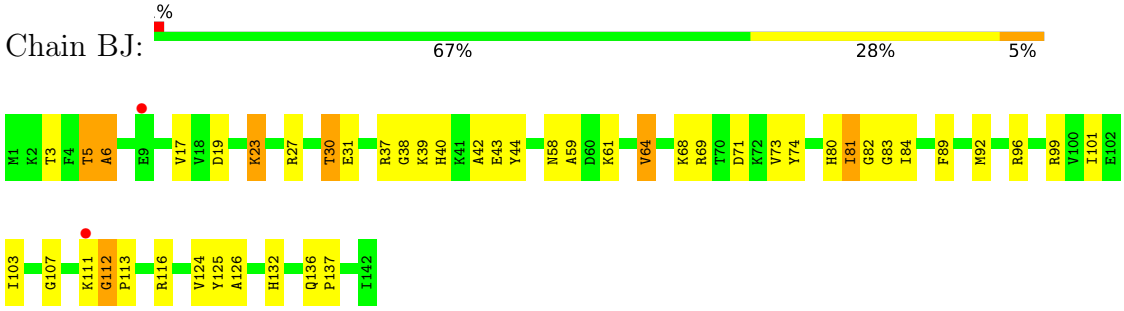
• Molecule 30: 50S ribosomal protein L11

Chain DI:



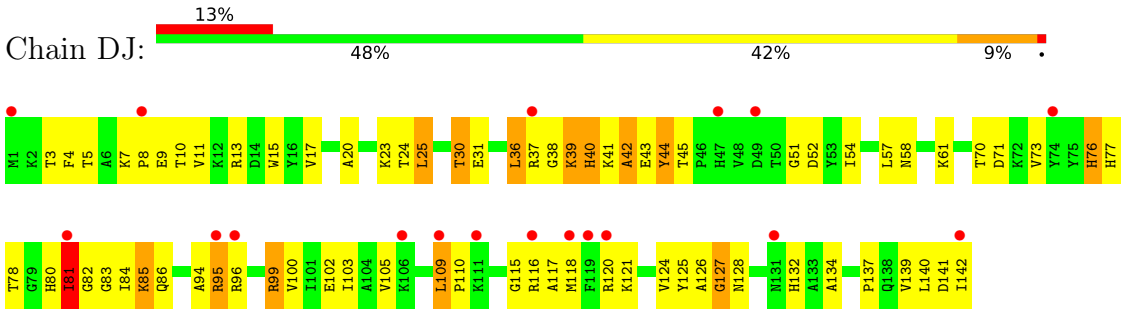
• Molecule 31: 50S ribosomal protein L13

Chain BJ:



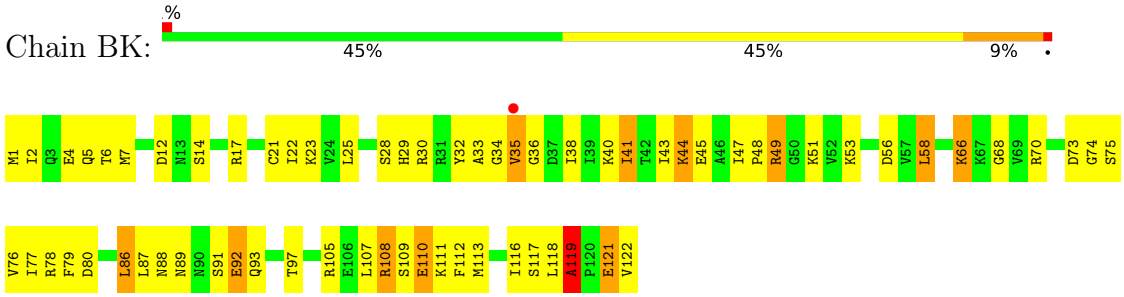
• Molecule 31: 50S ribosomal protein L13

Chain DJ:



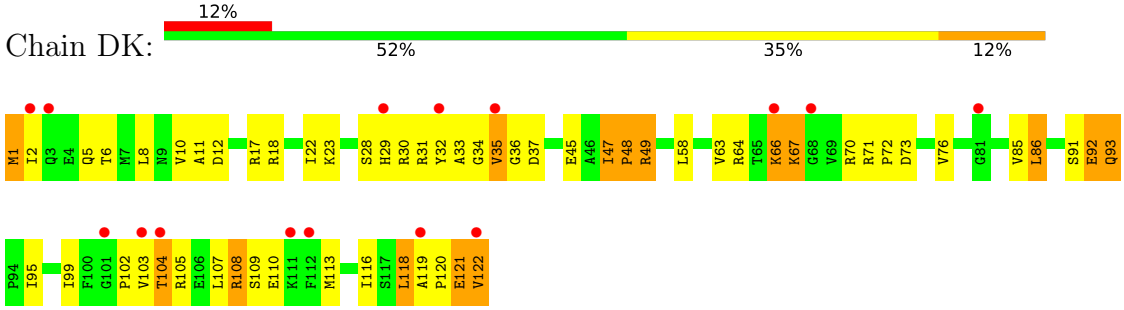
• Molecule 32: 50S ribosomal protein L14

Chain BK:



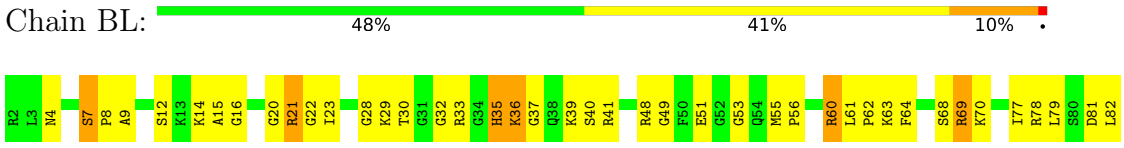
• Molecule 32: 50S ribosomal protein L14

Chain DK:



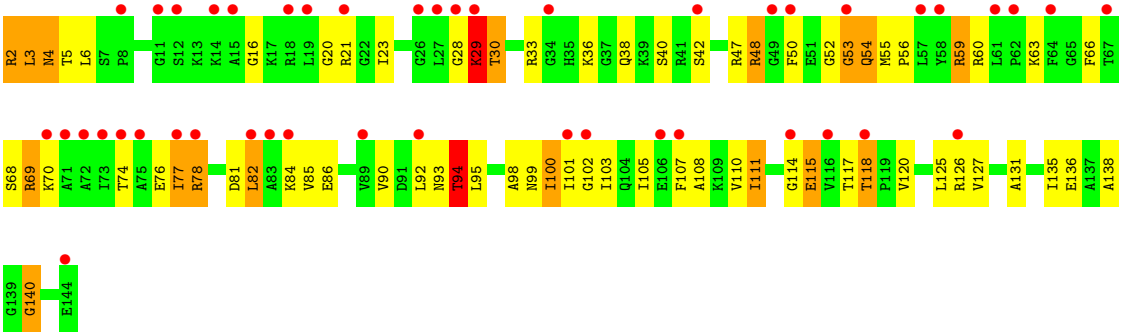
• Molecule 33: 50S ribosomal protein L15

Chain BL:



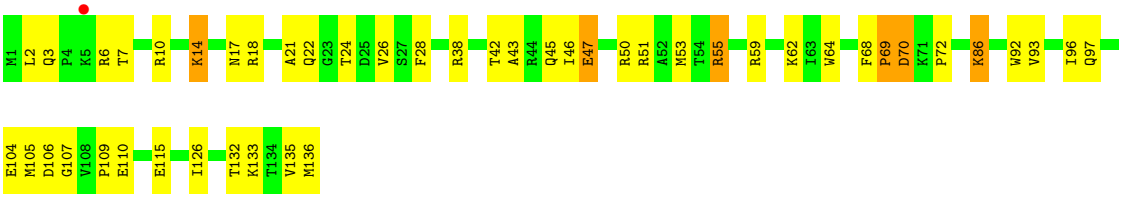
• Molecule 33: 50S ribosomal protein L15

Chain DL:



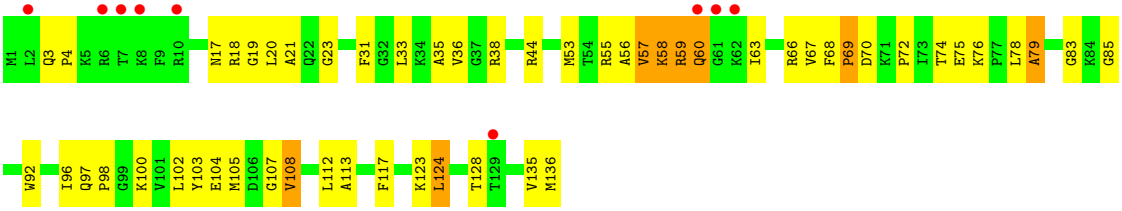
• Molecule 34: 50S ribosomal protein L16

Chain BM:



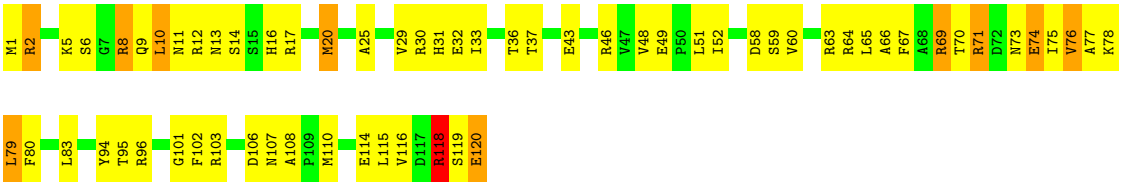
• Molecule 34: 50S ribosomal protein L16

Chain DM:



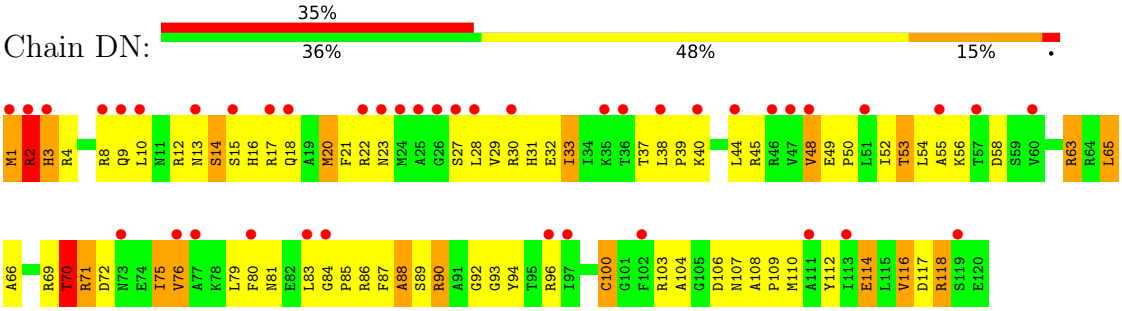
• Molecule 35: 50S ribosomal protein L17

Chain BN:



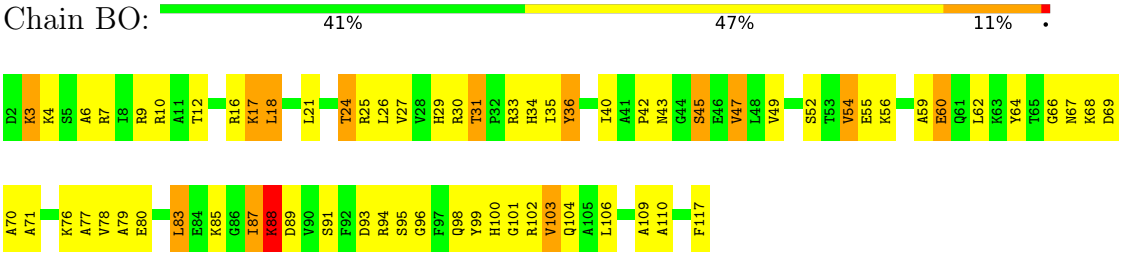
• Molecule 35: 50S ribosomal protein L17

Chain DN:



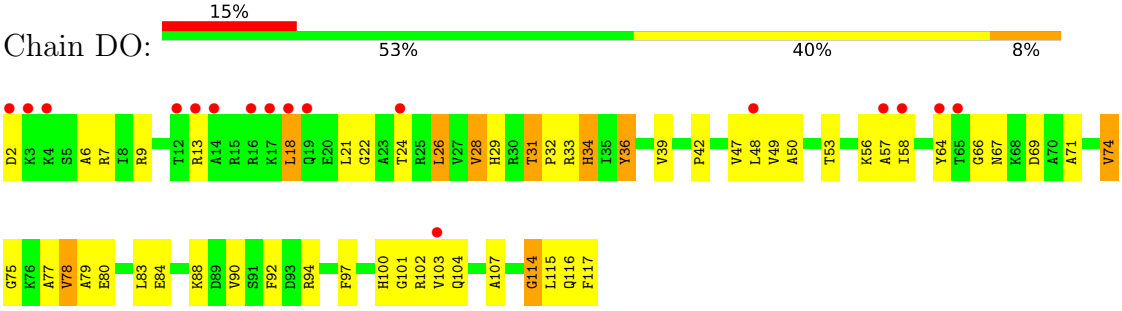
• Molecule 36: 50S ribosomal protein L18

Chain BO:



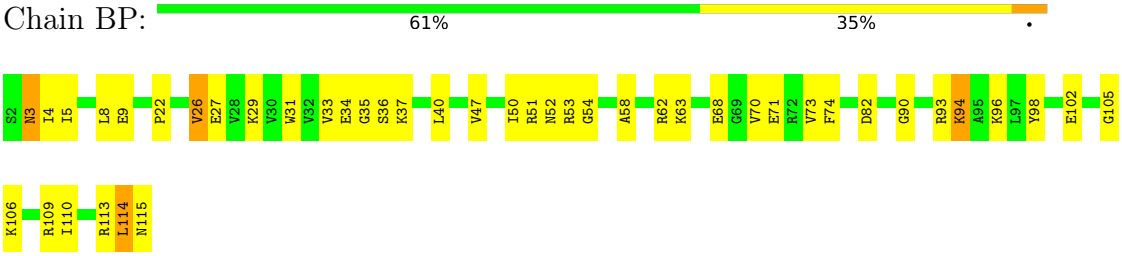
• Molecule 36: 50S ribosomal protein L18

Chain DO:



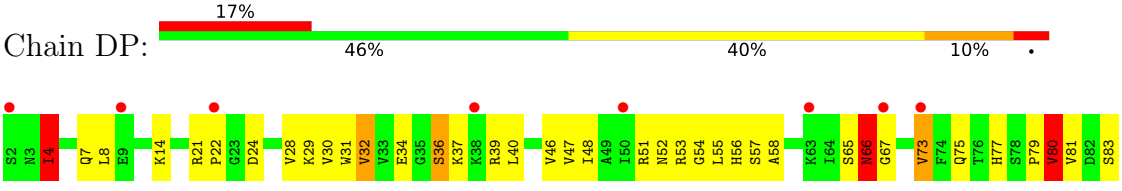
• Molecule 37: 50S ribosomal protein L19

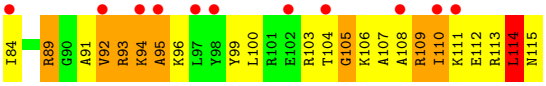
Chain BP:



• Molecule 37: 50S ribosomal protein L19

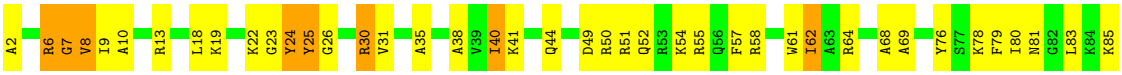
Chain DP:





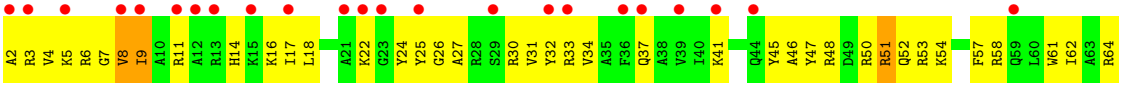
• Molecule 38: 50S ribosomal protein L20

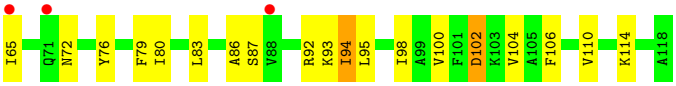
Chain BQ:



• Molecule 38: 50S ribosomal protein L20

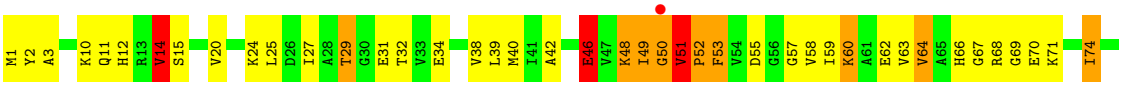
Chain DQ:

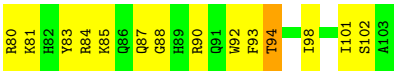




• Molecule 39: 50S ribosomal protein L21

Chain BR:



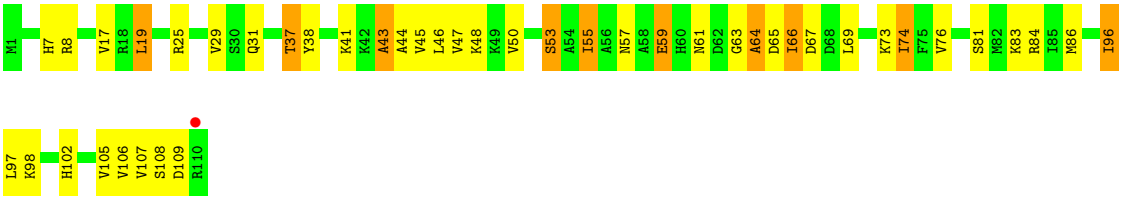


• Molecule 39: 50S ribosomal protein L21

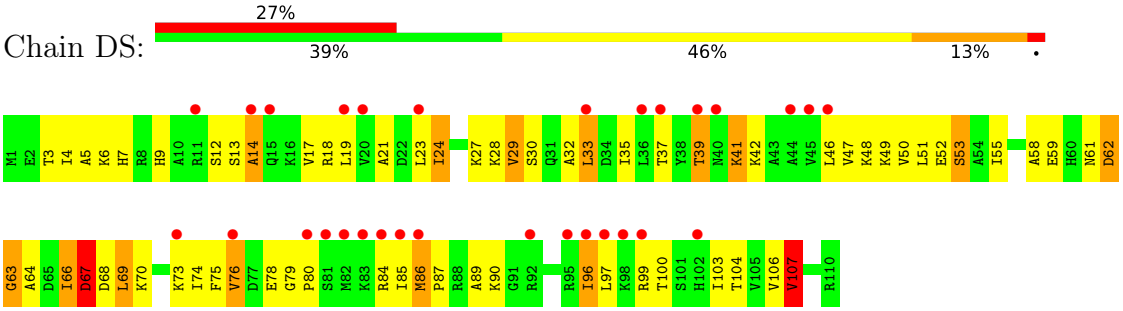
Chain DR:

• Molecule 40: 50S ribosomal protein L22

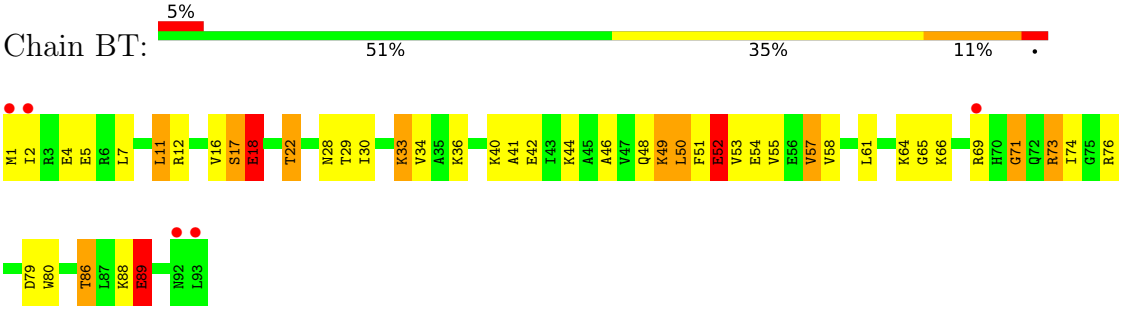
Chain BS:



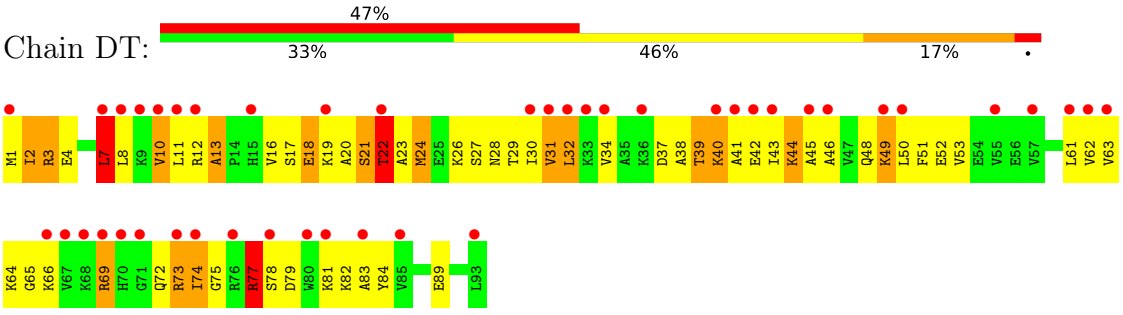
• Molecule 40: 50S ribosomal protein L22



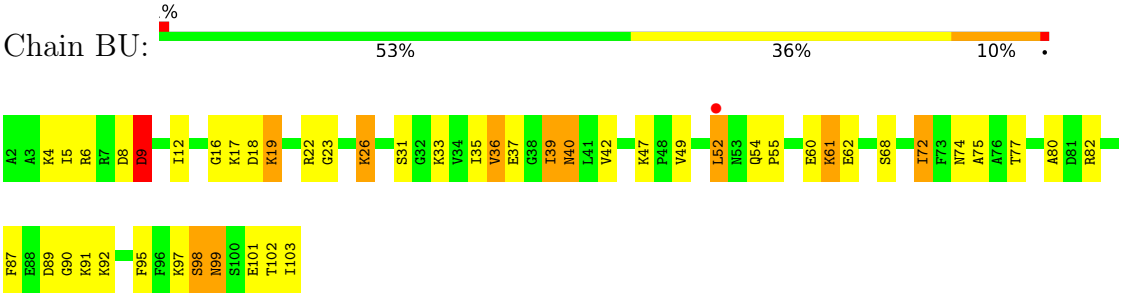
• Molecule 41: 50S ribosomal protein L23



• Molecule 41: 50S ribosomal protein L23

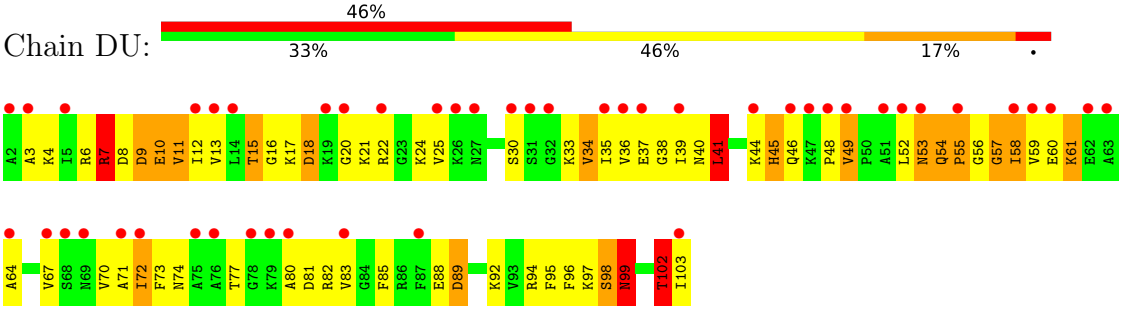


• Molecule 42: 50S ribosomal protein L24



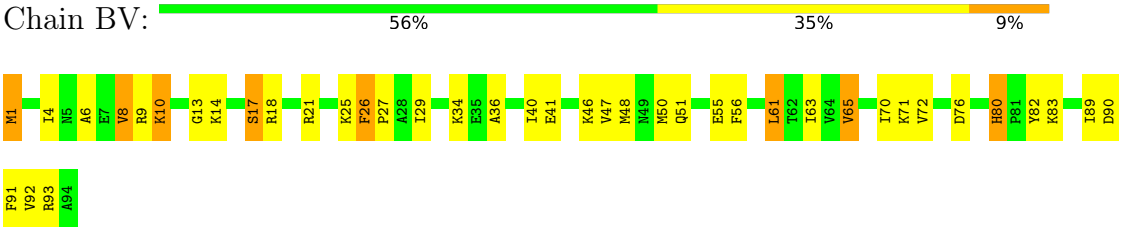
• Molecule 42: 50S ribosomal protein L24

Chain DU:



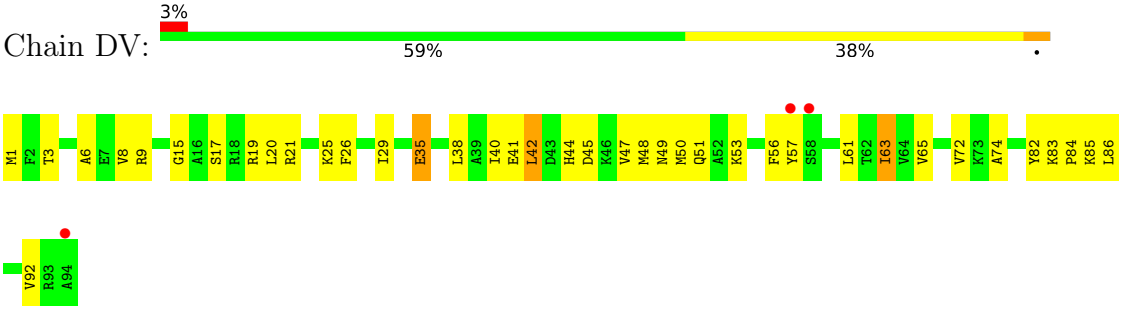
• Molecule 43: 50S ribosomal protein L25

Chain BV:



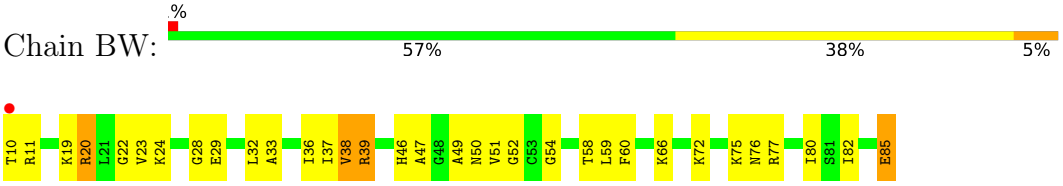
• Molecule 43: 50S ribosomal protein L25

Chain DV:



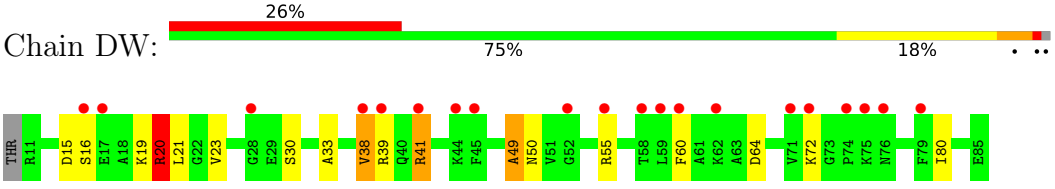
• Molecule 44: 50S ribosomal protein L27

Chain BW:



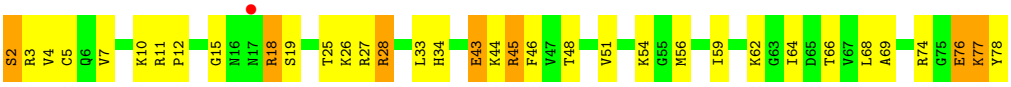
• Molecule 44: 50S ribosomal protein L27

Chain DW:

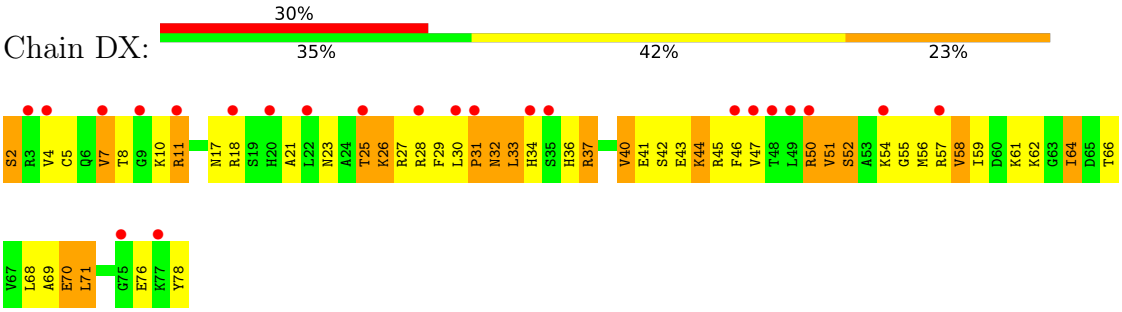


• Molecule 45: 50S ribosomal protein L28

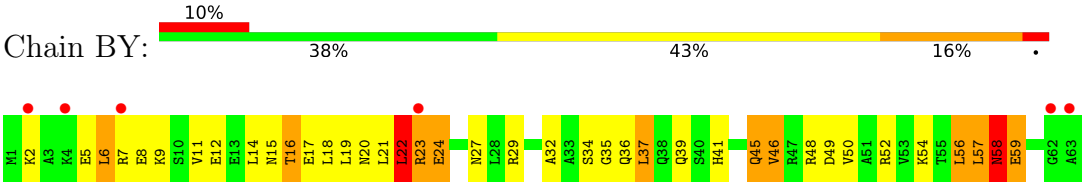
Chain BX:



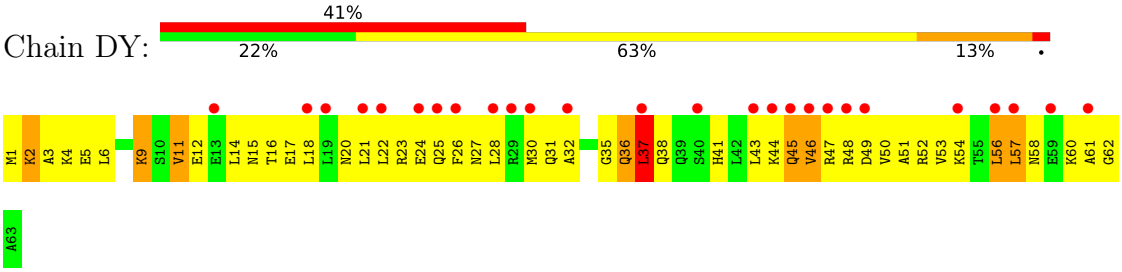
• Molecule 45: 50S ribosomal protein L28



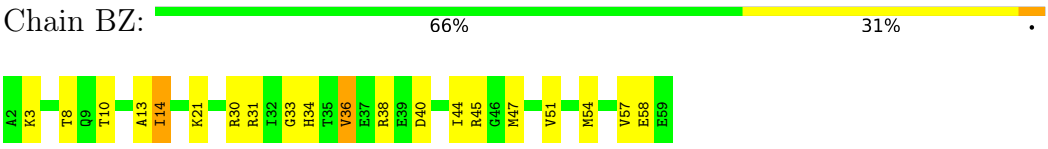
• Molecule 46: 50S ribosomal protein L29



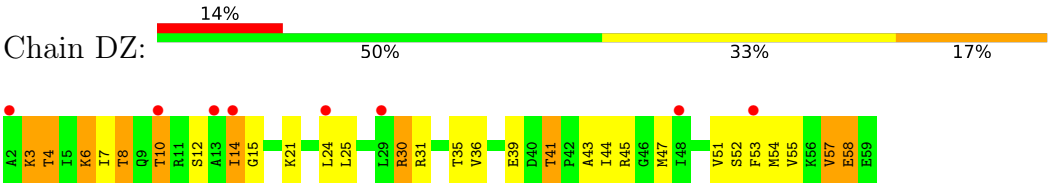
• Molecule 46: 50S ribosomal protein L29



• Molecule 47: 50S ribosomal protein L30



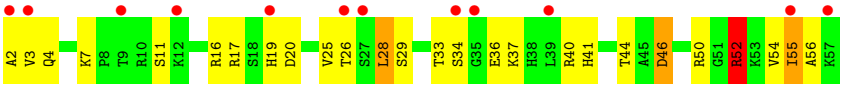
• Molecule 47: 50S ribosomal protein L30



• Molecule 48: 50S ribosomal protein L32

• Molecule 48: 50S ribosomal protein L32

Chain D0:



• Molecule 49: 50S ribosomal protein L33

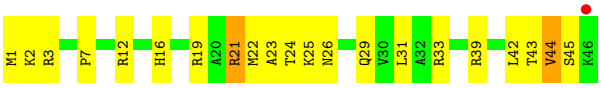
Chain B1:

• Molecule 49: 50S ribosomal protein L33

Chain D1:

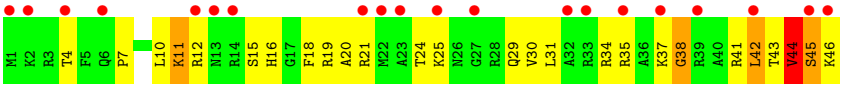
• Molecule 50: 50S ribosomal protein L34

Chain B2:



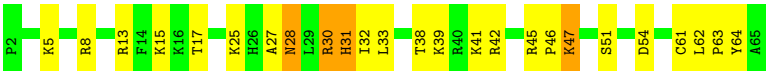
• Molecule 50: 50S ribosomal protein L34

Chain D2:



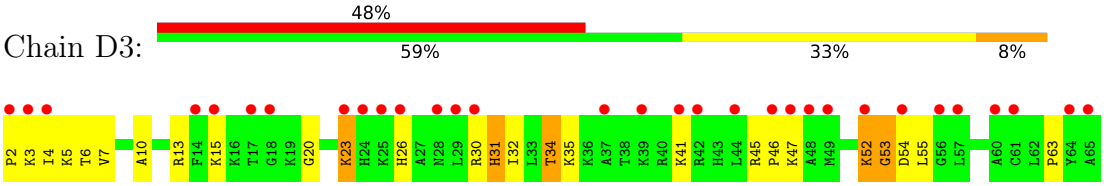
• Molecule 51: 50S ribosomal protein L35

Chain B3:



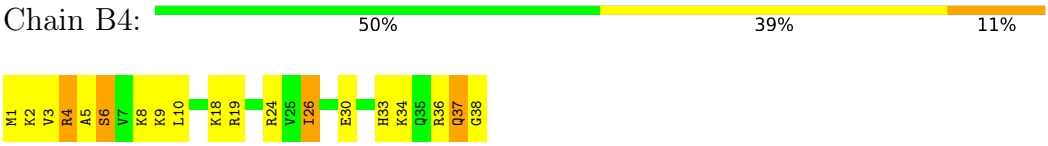
• Molecule 51: 50S ribosomal protein L35

Chain D3:



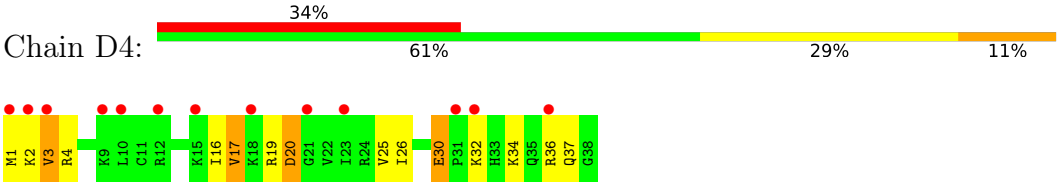
• Molecule 52: 50S ribosomal protein L36

Chain B4:



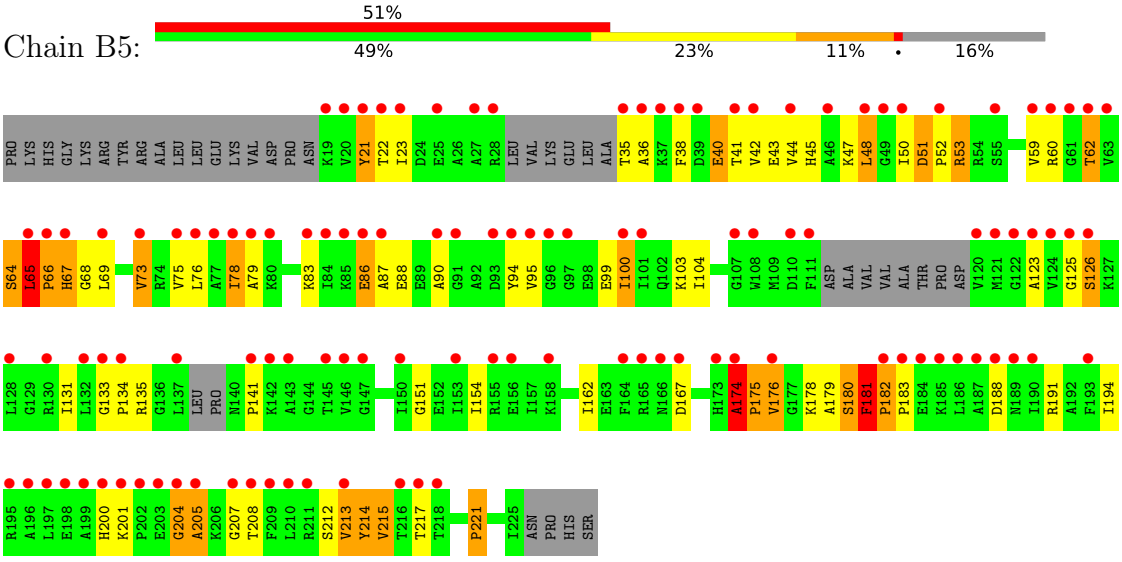
• Molecule 52: 50S ribosomal protein L36

Chain D4:



• Molecule 53: 50S ribosomal protein L1

Chain B5:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.64Å 434.61Å 625.01Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.41 – 2.90 69.41 – 2.90	Depositor EDS
% Data completeness (in resolution range)	90.0 (69.41-2.90) 90.0 (69.41-2.90)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.39 (at 2.91Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, R_{free}	0.223 , 0.265 0.226 , 0.266	Depositor DCC
R_{free} test set	4560 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å^2)	47.2	Xtriage
Anisotropy	0.436	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 48.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	288258	wwPDB-VP
Average B, all atoms (Å^2)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.74% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ZN, VIR

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.27	0/36944	0.47	0/57632
1	CA	0.23	0/36966	0.41	0/57666
2	AB	0.45	0/1736	0.90	5/2338 (0.2%)
2	CB	0.43	0/1736	0.83	4/2338 (0.2%)
3	AC	0.44	0/1652	0.86	5/2225 (0.2%)
3	CC	0.42	0/1652	0.79	0/2225
4	AD	0.44	0/1665	0.93	7/2227 (0.3%)
4	CD	0.49	0/1665	0.89	2/2227 (0.1%)
5	AE	0.51	0/1119	0.93	3/1504 (0.2%)
5	CE	0.52	0/1119	0.95	4/1504 (0.3%)
6	AF	0.52	0/836	0.91	1/1128 (0.1%)
6	CF	0.43	0/836	0.87	3/1128 (0.3%)
7	AG	0.44	0/1196	0.86	1/1602 (0.1%)
7	CG	0.45	0/1196	0.83	0/1602
8	AH	0.51	0/989	0.91	3/1326 (0.2%)
8	CH	0.39	0/989	0.79	1/1326 (0.1%)
9	AI	0.41	0/1034	0.84	1/1375 (0.1%)
9	CI	0.39	0/1034	0.81	0/1375
10	AJ	0.50	0/797	0.84	1/1077 (0.1%)
10	CJ	0.49	0/797	0.83	1/1077 (0.1%)
11	AK	0.47	0/893	0.84	1/1205 (0.1%)
11	CK	0.46	0/893	0.97	5/1205 (0.4%)
12	AL	0.51	0/969	0.93	1/1300 (0.1%)
12	CL	0.48	0/969	0.92	2/1300 (0.2%)
13	AM	0.45	0/893	0.92	2/1193 (0.2%)
13	CM	0.45	0/893	0.86	0/1193
14	AN	0.46	0/785	0.90	3/1043 (0.3%)
14	CN	0.38	0/785	0.83	2/1043 (0.2%)
15	AO	0.43	0/718	0.81	1/959 (0.1%)
15	CO	0.39	0/718	0.78	0/959
16	AP	0.54	0/659	0.89	0/884
16	CP	0.43	0/659	0.83	2/884 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	AQ	0.46	0/658	0.85	0/881
17	CQ	0.45	0/658	0.84	0/881
18	AR	0.42	0/463	0.80	0/621
18	CR	0.47	0/463	0.81	0/621
19	AS	0.47	0/653	0.93	2/877 (0.2%)
19	CS	0.49	0/653	0.87	2/877 (0.2%)
20	AT	0.48	0/671	0.90	1/888 (0.1%)
20	CT	0.41	0/671	0.87	1/888 (0.1%)
21	AU	0.54	0/431	0.90	0/570
21	CU	0.53	0/431	0.87	0/570
22	BA	0.44	0/69659	0.62	1/108672 (0.0%)
22	DA	0.22	0/69659	0.40	0/108672
23	BB	0.40	0/2850	0.60	0/4444
23	DB	0.17	0/2828	0.32	0/4410
24	BC	0.63	0/2122	1.02	10/2852 (0.4%)
24	DC	0.43	0/2122	0.86	4/2852 (0.1%)
25	BD	0.75	0/1586	1.09	6/2134 (0.3%)
25	DD	0.42	0/1586	0.84	3/2134 (0.1%)
26	BE	0.67	0/1571	0.99	5/2113 (0.2%)
26	DE	0.45	0/1571	0.84	1/2113 (0.0%)
27	BF	0.54	0/1435	0.94	2/1926 (0.1%)
27	DF	0.40	0/1435	0.78	2/1926 (0.1%)
28	BG	0.52	0/1343	0.92	0/1816
28	DG	0.42	0/1343	0.80	2/1816 (0.1%)
29	BH	0.49	0/1121	0.99	5/1515 (0.3%)
29	DH	0.47	0/1121	0.92	5/1515 (0.3%)
30	BI	0.55	0/1046	0.89	1/1410 (0.1%)
30	DI	0.55	0/1046	0.90	2/1410 (0.1%)
31	BJ	0.79	0/1152	1.05	6/1551 (0.4%)
31	DJ	0.44	0/1152	0.85	3/1551 (0.2%)
32	BK	0.70	0/948	1.06	3/1268 (0.2%)
32	DK	0.45	0/948	0.85	3/1268 (0.2%)
33	BL	0.72	0/1054	1.07	4/1403 (0.3%)
33	DL	0.44	0/1054	0.90	0/1403
34	BM	0.73	0/1093	1.02	4/1460 (0.3%)
34	DM	0.40	0/1093	0.76	0/1460
35	BN	0.76	0/974	1.05	0/1301
35	DN	0.45	0/974	0.84	0/1301
36	BO	0.61	0/902	0.95	0/1209
36	DO	0.38	0/902	0.78	0/1209
37	BP	0.66	0/929	0.90	1/1242 (0.1%)
37	DP	0.41	0/929	0.80	1/1242 (0.1%)
38	BQ	0.86	0/960	1.10	3/1278 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	DQ	0.43	0/960	0.84	1/1278 (0.1%)
39	BR	0.79	0/829	1.11	4/1107 (0.4%)
39	DR	0.41	0/829	0.88	4/1107 (0.4%)
40	BS	0.91	0/864	1.06	2/1156 (0.2%)
40	DS	0.45	0/864	0.80	0/1156
41	BT	0.59	0/745	0.90	0/994
41	DT	0.42	0/745	0.76	0/994
42	BU	0.56	0/788	0.91	1/1051 (0.1%)
42	DU	0.51	0/788	0.86	0/1051
43	BV	0.66	0/766	1.01	4/1025 (0.4%)
43	DV	0.36	0/766	0.73	0/1025
44	BW	0.71	0/587	1.01	0/776
44	DW	0.35	0/576	0.76	0/762
45	BX	0.58	0/635	0.89	0/848
45	DX	0.44	0/635	0.87	2/848 (0.2%)
46	BY	0.56	0/510	0.92	2/677 (0.3%)
46	DY	0.38	0/510	0.82	0/677
47	BZ	0.84	0/453	1.02	0/605
47	DZ	0.43	0/453	0.83	1/605 (0.2%)
48	B0	0.74	1/450 (0.2%)	1.03	2/599 (0.3%)
48	D0	0.46	0/450	0.77	0/599
49	B1	0.53	0/417	0.81	0/554
49	D1	0.45	0/417	0.72	0/554
50	B2	0.74	0/380	1.04	0/498
50	D2	0.45	0/380	0.92	0/498
51	B3	0.71	0/513	0.98	1/676 (0.1%)
51	D3	0.43	0/513	0.78	0/676
52	B4	0.73	0/303	1.08	3/397 (0.8%)
52	D4	0.38	0/303	0.83	2/397 (0.5%)
53	B5	0.54	0/1145	1.05	9/1556 (0.6%)
All	All	0.39	1/310626 (0.0%)	0.63	182/464366 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
5	CE	0	1
6	CF	0	1
11	AK	0	1
12	CL	0	1

Continued on next page...

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Mol	Chain	#Chirality outliers	#Planarity outliers
21	AU	0	1
21	CU	0	1
25	BD	0	1
All	All	0	7

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	B0	21	ALA	CA-CB	-5.56	1.44	1.53

All (182) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	BD	151	THR	CA-C-N	12.13	135.00	119.84
25	BD	151	THR	C-N-CA	12.13	135.00	119.84
53	B5	181	PHE	CA-C-N	10.33	131.02	120.38
53	B5	181	PHE	C-N-CA	10.33	131.02	120.38
20	AT	8	LYS	N-CA-C	-9.73	100.66	111.07
53	B5	182	PRO	CA-C-N	9.18	131.32	119.84
53	B5	182	PRO	C-N-CA	9.18	131.32	119.84
14	AN	51	LEU	CA-C-N	8.77	130.81	119.84
14	AN	51	LEU	C-N-CA	8.77	130.81	119.84
14	CN	51	LEU	CA-C-N	8.75	130.78	119.84
14	CN	51	LEU	C-N-CA	8.75	130.78	119.84
4	AD	167	LYS	CA-C-N	8.65	130.66	119.84
4	AD	167	LYS	C-N-CA	8.65	130.66	119.84
39	DR	51	VAL	CA-C-N	-7.64	112.10	119.89
39	DR	51	VAL	C-N-CA	-7.64	112.10	119.89
20	CT	8	LYS	N-CA-C	-7.60	103.81	113.23
12	AL	116	LYS	N-CA-C	-7.44	99.47	110.48
25	DD	151	THR	CA-C-N	-7.41	110.58	119.84
25	DD	151	THR	C-N-CA	-7.41	110.58	119.84
11	CK	90	GLY	CA-C-N	7.32	128.99	119.84
11	CK	90	GLY	C-N-CA	7.32	128.99	119.84
24	DC	217	ARG	CA-C-N	7.28	128.94	119.84
24	DC	217	ARG	C-N-CA	7.28	128.94	119.84
24	BC	21	ASN	CA-C-N	7.27	127.43	119.87
24	BC	21	ASN	C-N-CA	7.27	127.43	119.87
33	BL	7	SER	CA-C-N	7.25	127.18	119.85
33	BL	7	SER	C-N-CA	7.25	127.18	119.85
4	AD	102	VAL	N-CA-C	-7.21	105.93	111.62
46	BY	45	GLN	N-CA-C	-7.21	100.55	110.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	CH	90	ASP	N-CA-C	-7.18	103.53	111.36
29	BH	121	VAL	CA-C-N	7.15	134.56	121.70
29	BH	121	VAL	C-N-CA	7.15	134.56	121.70
39	BR	51	VAL	CA-C-N	-7.08	111.00	119.84
39	BR	51	VAL	C-N-CA	-7.08	111.00	119.84
26	BE	41	GLN	N-CA-C	-7.00	101.50	110.53
5	AE	103	THR	N-CA-C	-6.94	102.17	111.96
31	BJ	112	GLY	CA-C-N	6.92	126.43	119.24
31	BJ	112	GLY	C-N-CA	6.92	126.43	119.24
26	DE	60	TRP	N-CA-C	6.88	118.59	108.14
31	BJ	27	ARG	N-CA-C	-6.87	105.06	113.50
34	BM	135	VAL	N-CA-C	-6.85	100.74	109.30
19	CS	29	LYS	CA-C-N	6.74	128.27	119.84
19	CS	29	LYS	C-N-CA	6.74	128.27	119.84
26	BE	146	VAL	N-CA-C	6.65	117.13	108.35
39	DR	49	ILE	N-CA-C	6.63	117.00	108.12
2	AB	50	PHE	N-CA-C	-6.62	104.85	113.12
53	B5	133	GLY	CA-C-N	6.62	128.11	119.84
53	B5	133	GLY	C-N-CA	6.62	128.11	119.84
29	BH	123	ARG	N-CA-C	6.61	119.51	110.06
53	B5	174	ALA	CA-C-N	6.61	128.10	119.84
53	B5	174	ALA	C-N-CA	6.61	128.10	119.84
29	DH	121	VAL	N-CA-C	-6.59	106.25	113.43
13	AM	111	GLY	CA-C-N	6.58	128.07	119.84
13	AM	111	GLY	C-N-CA	6.58	128.07	119.84
38	BQ	24	TYR	N-CA-C	6.53	118.19	111.14
32	DK	47	ILE	CA-C-N	6.42	127.86	119.84
32	DK	47	ILE	C-N-CA	6.42	127.86	119.84
7	AG	145	ALA	N-CA-C	-6.38	101.55	110.35
25	BD	151	THR	C-N-CD	-6.31	99.14	125.00
5	CE	137	VAL	N-CA-C	-6.30	100.86	109.37
33	BL	70	LYS	N-CA-C	-6.27	104.44	111.28
4	AD	64	ILE	N-CA-C	6.15	116.31	110.53
10	CJ	86	ALA	N-CA-C	-6.14	105.92	113.41
5	CE	56	VAL	CB-CA-C	-6.12	107.86	114.35
5	CE	153	VAL	N-CA-C	-6.12	104.00	112.50
24	BC	226	ASN	CA-C-N	6.09	127.45	119.84
24	BC	226	ASN	C-N-CA	6.09	127.45	119.84
11	CK	88	GLY	CA-C-N	6.02	127.37	119.84
11	CK	88	GLY	C-N-CA	6.02	127.37	119.84
2	AB	221	VAL	N-CA-C	-6.01	104.99	110.82
26	BE	88	ARG	CA-C-N	-5.97	113.63	119.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	BE	88	ARG	C-N-CA	-5.97	113.63	119.78
5	AE	90	THR	CB-CA-C	-5.94	109.74	116.63
27	BF	175	PHE	CA-C-N	5.89	127.20	119.84
27	BF	175	PHE	C-N-CA	5.89	127.20	119.84
11	AK	75	LYS	N-CA-C	-5.86	105.84	112.87
6	AF	17	GLN	N-CA-C	-5.85	105.47	113.30
39	BR	46	GLU	N-CA-C	5.85	118.43	108.90
25	BD	193	VAL	CA-C-N	-5.81	114.28	120.03
25	BD	193	VAL	C-N-CA	-5.81	114.28	120.03
29	DH	31	VAL	CA-C-N	-5.80	113.73	119.93
29	DH	31	VAL	C-N-CA	-5.80	113.73	119.93
5	AE	139	ALA	N-CA-C	-5.79	105.10	111.82
37	BP	3	ASN	N-CA-C	-5.79	102.70	111.56
3	AC	72	ARG	CA-C-N	5.76	125.89	119.32
3	AC	72	ARG	C-N-CA	5.76	125.89	119.32
34	BM	96	ILE	CB-CA-C	-5.74	103.53	110.99
2	CB	11	LYS	N-CA-C	-5.72	104.96	111.14
28	DG	7	ALA	CA-C-N	5.71	126.98	119.84
28	DG	7	ALA	C-N-CA	5.71	126.98	119.84
2	CB	61	ALA	N-CA-C	-5.70	105.83	112.89
12	CL	41	THR	CA-C-N	5.69	126.01	119.92
12	CL	41	THR	C-N-CA	5.69	126.01	119.92
31	DJ	45	THR	CA-C-N	5.68	126.95	119.84
31	DJ	45	THR	C-N-CA	5.68	126.95	119.84
38	BQ	62	ILE	N-CA-C	-5.67	104.98	110.42
39	BR	14	VAL	N-CA-C	5.66	116.86	108.65
6	CF	90	MET	N-CA-C	5.65	117.99	109.23
3	AC	15	VAL	N-CA-C	5.64	121.08	109.34
2	AB	181	ILE	CA-C-N	5.63	126.88	119.84
2	AB	181	ILE	C-N-CA	5.63	126.88	119.84
10	AJ	21	ALA	N-CA-C	-5.61	106.79	113.97
32	DK	121	GLU	N-CA-C	5.60	117.36	108.79
30	DI	63	ALA	N-CA-C	-5.59	105.56	112.38
6	CF	11	HIS	CA-C-N	5.57	126.80	119.84
6	CF	11	HIS	C-N-CA	5.57	126.80	119.84
32	BK	76	VAL	CB-CA-C	-5.52	101.56	110.28
29	BH	70	GLU	N-CA-C	-5.51	106.52	113.18
39	DR	44	GLY	N-CA-C	-5.50	106.00	113.37
46	BY	58	ASN	N-CA-C	-5.50	105.70	112.90
31	BJ	73	VAL	N-CA-C	5.47	115.74	107.80
38	DQ	4	VAL	N-CA-C	5.45	114.22	106.53
34	BM	21	ALA	N-CA-C	5.45	117.76	110.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BS	45	VAL	CB-CA-C	-5.45	104.91	111.88
31	DJ	99	ARG	N-CA-C	5.42	117.19	111.28
31	BJ	59	ALA	N-CA-C	-5.41	105.54	111.82
4	AD	123	ILE	CB-CA-C	-5.40	106.67	111.74
8	AH	79	SER	N-CA-C	-5.39	102.78	110.59
16	CP	40	ASN	CA-C-N	5.37	125.04	119.56
16	CP	40	ASN	C-N-CA	5.37	125.04	119.56
52	B4	30	GLU	CA-C-N	5.37	125.19	119.28
52	B4	30	GLU	C-N-CA	5.37	125.19	119.28
5	CE	139	ALA	N-CA-C	-5.36	105.44	111.28
8	AH	110	VAL	CB-CA-C	-5.34	105.52	111.35
2	CB	18	HIS	N-CA-C	5.34	116.81	110.19
27	DF	175	PHE	CA-C-N	5.34	126.51	119.84
27	DF	175	PHE	C-N-CA	5.34	126.51	119.84
24	DC	243	HIS	CA-C-N	5.33	125.33	119.90
24	DC	243	HIS	C-N-CA	5.33	125.33	119.90
32	BK	119	ALA	CA-C-N	5.32	125.39	119.32
32	BK	119	ALA	C-N-CA	5.32	125.39	119.32
34	BM	46	ILE	N-CA-C	-5.32	105.19	110.62
37	DP	4	ILE	N-CA-C	-5.31	107.24	111.81
45	DX	11	ARG	CA-C-N	5.30	126.47	119.84
45	DX	11	ARG	C-N-CA	5.30	126.47	119.84
47	DZ	57	VAL	N-CA-C	5.30	115.76	108.12
2	CB	91	PHE	N-CA-C	5.29	116.56	108.52
25	DD	153	GLY	N-CA-C	-5.29	108.34	115.21
2	AB	86	SER	N-CA-C	5.28	117.45	111.11
53	B5	40	GLU	N-CA-C	-5.28	106.79	113.18
8	AH	114	ARG	N-CA-C	-5.27	104.78	111.11
52	B4	5	ALA	N-CA-C	5.27	117.43	111.11
30	BI	32	GLY	N-CA-C	-5.26	107.30	115.67
3	AC	68	ILE	N-CA-C	5.26	114.36	106.42
43	BV	80	HIS	CA-C-N	5.26	125.31	119.32
43	BV	80	HIS	C-N-CA	5.26	125.31	119.32
51	B3	38	THR	N-CA-C	-5.26	105.44	111.07
24	BC	217	ARG	CA-C-N	5.24	125.18	119.78
24	BC	217	ARG	C-N-CA	5.24	125.18	119.78
4	AD	190	ASP	N-CA-C	-5.23	103.62	110.53
19	AS	75	ALA	CA-C-N	5.23	126.38	119.84
19	AS	75	ALA	C-N-CA	5.23	126.38	119.84
26	BE	73	ILE	N-CA-C	-5.21	105.98	113.07
9	AI	98	LEU	N-CA-C	-5.21	106.43	112.89
42	BU	23	GLY	N-CA-C	5.21	118.08	110.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	BC	182	ARG	NE-CZ-NH2	5.20	123.88	119.20
29	BH	91	PHE	N-CA-C	-5.19	106.94	113.28
11	CK	76	GLU	N-CA-C	-5.19	106.73	113.16
4	CD	6	GLY	CA-C-N	5.17	125.46	119.93
4	CD	6	GLY	C-N-CA	5.17	125.46	119.93
30	DI	8	TYR	N-CA-C	5.17	116.60	107.61
25	BD	129	THR	CB-CA-C	-5.16	101.86	109.90
3	AC	99	ALA	N-CA-C	5.15	116.70	107.80
31	BJ	6	ALA	N-CA-C	-5.14	103.70	110.43
48	B0	7	LYS	CA-C-N	5.10	125.01	119.76
48	B0	7	LYS	C-N-CA	5.10	125.01	119.76
38	BQ	8	VAL	N-CA-CB	5.09	116.51	110.55
43	BV	26	PHE	CA-C-N	5.09	125.30	120.31
43	BV	26	PHE	C-N-CA	5.09	125.30	120.31
29	DH	123	ARG	N-CA-C	-5.09	105.38	112.30
24	BC	254	GLY	N-CA-C	5.08	119.02	113.58
22	BA	1378	A	C4'-C3'-O3'	5.07	117.01	109.40
24	BC	13	ARG	N-CA-C	-5.07	107.22	113.41
52	D4	30	GLU	CA-C-N	5.07	124.68	119.05
52	D4	30	GLU	C-N-CA	5.07	124.68	119.05
29	DH	62	LEU	N-CA-C	-5.06	107.06	113.18
14	AN	35	ASN	N-CA-C	-5.04	106.44	112.59
24	BC	213	TRP	CB-CA-C	5.04	119.68	110.11
15	AO	57	LEU	N-CA-C	-5.04	105.68	111.07
33	BL	22	GLY	N-CA-C	5.03	118.31	111.72
40	BS	43	ALA	N-CA-C	-5.03	105.88	111.36
4	AD	30	THR	N-CA-C	-5.01	100.13	110.80

There are no chirality outliers.

All (7) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
21	AU	39	GLU	Peptide
25	BD	151	THR	Peptide
5	CE	102	GLY	Peptide
6	CF	54	LEU	Peptide
12	CL	24	LEU	Peptide
21	CU	39	GLU	Peptide

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32995	0	16607	1127	4
1	CA	33015	0	16617	1086	0
2	AB	1705	0	1732	198	0
2	CB	1705	0	1732	144	0
3	AC	1625	0	1696	89	0
3	CC	1625	0	1696	76	0
4	AD	1643	0	1707	164	0
4	CD	1643	0	1707	131	0
5	AE	1106	0	1148	81	0
5	CE	1106	0	1148	125	0
6	AF	818	0	808	71	0
6	CF	818	0	808	67	0
7	AG	1182	0	1238	59	0
7	CG	1182	0	1238	67	0
8	AH	979	0	1031	74	0
8	CH	979	0	1031	50	0
9	AI	1022	0	1070	86	0
9	CI	1022	0	1070	65	0
10	AJ	787	0	828	80	0
10	CJ	787	0	828	50	0
11	AK	877	0	887	70	0
11	CK	877	0	887	70	0
12	AL	955	0	1016	69	0
12	CL	955	0	1016	78	0
13	AM	884	0	941	72	0
13	CM	884	0	941	49	0
14	AN	774	0	824	73	0
14	CN	774	0	824	51	0
15	AO	710	0	728	34	0
15	CO	710	0	728	44	0
16	AP	649	0	666	67	0
16	CP	649	0	666	29	0
17	AQ	649	0	691	74	0
17	CQ	649	0	691	56	0
18	AR	456	0	478	22	0
18	CR	456	0	478	36	0
19	AS	638	0	665	59	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CS	638	0	665	36	0
20	AT	665	0	714	63	0
20	CT	665	0	714	49	0
21	AU	426	0	449	60	0
21	CU	426	0	449	55	0
22	BA	62195	0	31280	1629	0
22	DA	62195	0	31280	2239	0
23	BB	2549	0	1291	54	0
23	DB	2529	0	1281	62	0
24	BC	2083	0	2154	130	0
24	DC	2083	0	2154	132	0
25	BD	1565	0	1616	71	0
25	DD	1565	0	1616	83	0
26	BE	1552	0	1619	70	0
26	DE	1552	0	1619	80	0
27	BF	1411	0	1444	101	0
27	DF	1411	0	1444	64	0
28	BG	1323	0	1371	53	0
28	DG	1323	0	1371	56	0
29	BH	1110	0	1147	161	0
29	DH	1110	0	1148	125	4
30	BI	1032	0	1085	75	0
30	DI	1032	0	1085	69	0
31	BJ	1129	0	1162	37	0
31	DJ	1129	0	1162	54	0
32	BK	939	0	1012	55	0
32	DK	939	0	1012	52	0
33	BL	1045	0	1117	66	0
33	DL	1045	0	1117	70	0
34	BM	1074	0	1157	32	0
34	DM	1074	0	1157	33	0
35	BN	961	0	1000	57	0
35	DN	961	0	1000	75	0
36	BO	892	0	923	57	0
36	DO	892	0	923	45	0
37	BP	917	0	962	32	0
37	DP	917	0	962	47	0
38	BQ	947	0	1019	55	0
38	DQ	947	0	1019	53	0
39	BR	816	0	839	75	0
39	DR	816	0	839	48	0
40	BS	857	0	922	37	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DS	857	0	922	53	0
41	BT	739	0	807	42	0
41	DT	739	0	807	65	0
42	BU	780	0	831	30	0
42	DU	780	0	831	72	0
43	BV	753	0	780	29	0
43	DV	753	0	780	28	0
44	BW	580	0	594	19	0
44	DW	569	0	581	17	0
45	BX	625	0	652	26	0
45	DX	625	0	652	48	0
46	BY	509	0	543	33	0
46	DY	509	0	543	49	0
47	BZ	449	0	488	12	0
47	DZ	449	0	488	17	0
48	B0	444	0	458	24	0
48	D0	444	0	458	20	0
49	B1	410	0	440	27	0
49	D1	410	0	440	18	0
50	B2	377	0	418	20	0
50	D2	377	0	418	24	0
51	B3	504	0	572	27	0
51	D3	504	0	572	21	0
52	B4	302	0	340	15	0
52	D4	302	0	342	15	0
53	B5	1142	0	865	50	0
54	AA	71	0	0	0	0
54	AN	1	0	0	0	0
54	BA	193	0	0	0	0
54	BB	4	0	0	0	0
54	BD	1	0	0	0	0
54	BQ	1	0	0	0	0
54	CA	56	0	0	0	0
54	D2	1	0	0	0	0
54	DA	166	0	0	0	0
54	DB	3	0	0	0	0
54	DQ	1	0	0	0	0
55	BA	38	0	35	5	0
55	DA	38	0	35	15	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	192	0	0	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	AL	2	0	0	0	0
57	AN	6	0	0	1	0
57	AT	2	0	0	0	0
57	AU	1	0	0	0	0
57	B2	1	0	0	0	0
57	B3	2	0	0	0	0
57	B4	2	0	0	0	0
57	BA	620	0	0	65	0
57	BB	13	0	0	0	0
57	BC	7	0	0	1	0
57	BD	3	0	0	2	0
57	BE	4	0	0	0	0
57	BF	1	0	0	1	0
57	BJ	1	0	0	0	0
57	BL	5	0	0	0	0
57	BN	3	0	0	0	0
57	BQ	1	0	0	0	0
57	BS	1	0	0	0	0
57	BT	1	0	0	0	0
57	BV	1	0	0	0	0
57	CA	191	0	0	26	0
57	CL	1	0	0	0	0
57	CN	2	0	0	0	0
57	CT	2	0	0	0	0
57	CU	2	0	0	1	0
57	D2	1	0	0	0	0
57	D3	2	0	0	0	0
57	D4	1	0	0	0	0
57	DA	607	0	0	105	0
57	DB	13	0	0	0	0
57	DC	12	0	0	2	0
57	DD	4	0	0	2	0
57	DE	6	0	0	2	0
57	DJ	1	0	0	0	0
57	DL	4	0	0	1	0
57	DN	2	0	0	0	0
57	DT	1	0	0	0	0
57	DU	1	0	0	0	0
57	DV	1	0	0	0	0
All	All	288258	0	192859	11151	4

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 24.

All (11151) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1153:C:OP2	57:BA:3360:HOH:O	1.56	1.23
22:BA:621:A:OP2	57:BA:3293:HOH:O	1.57	1.23
29:BH:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
29:BH:123:ARG:HH22	1:CA:367:U:P	1.69	1.15
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
29:BH:123:ARG:NH2	1:CA:367:U:OP2	1.82	1.13
25:DD:151:THR:O	25:DD:153:GLY:N	1.80	1.12
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	1.84	1.11
22:DA:2503:A:H8	55:DA:3001:VIR:H22	1.13	1.11
22:BA:2033:A:OP1	57:BA:3479:HOH:O	1.71	1.09
22:DA:2199:A:C1'	29:DH:28:ASN:ND2	2.14	1.09
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
22:BA:842:U:O4	57:BA:3589:HOH:O	1.68	1.08
22:BA:797:G:O6	57:BA:3323:HOH:O	1.71	1.08
22:DA:2711:A:OP2	57:DA:3544:HOH:O	1.69	1.07
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.72	1.07
22:BA:2728:U:O2'	22:BA:2729:G:OP2	1.73	1.05
22:BA:1916:A:C4	22:BA:1917:U:H1'	1.91	1.04
2:AB:21:ARG:O	2:AB:23:TRP:N	1.89	1.04
22:DA:2271:G:O6	57:DA:3506:HOH:O	1.76	1.04
22:DA:602:A:O2'	22:DA:604:G:O2'	1.77	1.03
22:BA:1439:A:OP2	57:BA:3638:HOH:O	1.75	1.02
22:DA:789:A:N1	57:DA:3308:HOH:O	1.93	1.01
1:AA:1077:G:N7	57:AA:1788:HOH:O	1.92	1.01
22:DA:761:A:OP2	57:DA:3292:HOH:O	1.77	1.01
22:DA:58:G:OP1	41:DT:78:SER:OG	1.79	1.00
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	1.00
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	0.99
25:BD:140:HIS:NE2	57:BD:402:HOH:O	1.93	0.99
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
22:DA:370:G:N7	57:DA:3555:HOH:O	1.93	0.99
22:DA:2627:G:O2'	22:DA:2781:A:N1	1.96	0.99
22:DA:618:G:O6	57:DA:3288:HOH:O	1.80	0.99
1:CA:412:A:O2'	1:CA:413:G:O5'	1.81	0.98
22:BA:1342:A:OP2	57:BA:3719:HOH:O	1.79	0.98
22:DA:2056:G:OP1	57:DA:3664:HOH:O	1.82	0.98
22:BA:194:G:N7	57:BA:3764:HOH:O	1.97	0.98
13:AM:11:ASP:OD1	13:AM:12:HIS:N	1.97	0.97
5:AE:99:ALA:O	5:AE:101:GLU:N	1.96	0.97
1:AA:533:A:OP1	57:AA:1847:HOH:O	1.82	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:70:ASN:O	24:BC:72:ASP:N	1.97	0.96
22:DA:1050:A:N6	22:DA:1109:C:O2	1.95	0.96
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.96
18:CR:25:ASP:O	18:CR:27:ALA:N	1.99	0.96
22:DA:2093:G:OP1	29:DH:23:ALA:HB3	1.63	0.96
24:DC:157:SER:O	24:DC:160:THR:OG1	1.84	0.95
22:BA:2498:C:OP2	57:BA:3689:HOH:O	1.82	0.95
22:DA:2094:A:H5'	29:DH:25:TYR:CG	2.02	0.95
1:CA:858:G:N7	57:CA:1819:HOH:O	2.00	0.95
14:CN:41:ARG:NH1	14:CN:42:TRP:O	1.99	0.95
22:BA:198:C:OP2	57:BA:3766:HOH:O	1.83	0.94
1:AA:509:A:OP2	57:AA:1722:HOH:O	1.85	0.94
22:DA:2093:G:H4'	29:DH:25:TYR:N	1.81	0.94
2:AB:82:ASP:O	2:AB:85:LEU:N	2.00	0.94
24:BC:244:PRO:O	24:BC:251:GLN:NE2	2.01	0.94
27:DF:122:PHE:O	27:DF:124:GLY:N	2.02	0.93
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.02	0.93
22:BA:2017:U:OP2	57:BA:3271:HOH:O	1.84	0.93
1:AA:980:C:OP1	57:AA:1836:HOH:O	1.87	0.93
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.03	0.93
22:BA:2278:A:OP1	34:BM:10:ARG:NH2	2.02	0.93
22:DA:514:A:N3	22:DA:581:C:O2'	2.02	0.93
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.02	0.92
22:DA:2507:C:OP1	57:DA:3707:HOH:O	1.87	0.92
6:CF:12:PRO:O	6:CF:15:SER:OG	1.87	0.92
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.92
22:DA:2199:A:H1'	29:DH:28:ASN:ND2	1.82	0.92
22:DA:2550:G:OP1	57:DA:3719:HOH:O	1.85	0.92
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	2.03	0.92
22:DA:1395:A:OP2	57:DA:3400:HOH:O	1.86	0.92
1:CA:1500:A:OP2	57:CA:1883:HOH:O	1.88	0.91
1:AA:1317:C:OP1	14:AN:56:SER:OG	1.88	0.91
22:DA:621:A:OP2	57:DA:3289:HOH:O	1.87	0.91
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.03	0.91
22:DA:1010:A:OP2	57:DA:3776:HOH:O	1.88	0.91
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
22:DA:2503:A:C8	55:DA:3001:VIR:H22	2.05	0.90
22:DA:1267:U:O3'	57:DA:3374:HOH:O	1.88	0.90
22:DA:1439:A:OP2	57:DA:3627:HOH:O	1.90	0.90
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.89	0.90
12:CL:22:PRO:O	12:CL:24:LEU:N	2.04	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:784:G:OP1	57:DA:3310:HOH:O	1.91	0.89
1:CA:532:A:N6	3:CC:192:THR:OG1	2.04	0.89
1:CA:1198:G:N7	57:CA:1852:HOH:O	2.04	0.89
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	2.05	0.89
22:DA:2005:A:OP1	57:DA:3379:HOH:O	1.91	0.89
22:DA:2094:A:OP1	29:DH:22:LYS:HG3	1.72	0.89
22:DA:2588:G:OP1	57:DA:3310:HOH:O	1.89	0.89
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.06	0.89
24:BC:182:ARG:NH2	24:BC:183:LYS:O	2.07	0.88
22:DA:2243:U:OP1	57:DA:3736:HOH:O	1.91	0.88
1:CA:1211:U:O2'	1:CA:1212:U:OP2	1.89	0.88
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.05	0.88
22:DA:1652:A:OP1	35:DN:8:ARG:NH2	2.07	0.88
35:DN:87:PHE:O	35:DN:89:SER:N	2.06	0.88
4:CD:192:SER:OG	4:CD:193:ALA:N	2.04	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
2:CB:103:ASN:ND2	2:CB:106:THR:OG1	2.07	0.88
22:BA:627:A:OP1	33:BL:78:ARG:NH1	2.07	0.87
22:DA:2505:G:OP2	55:DA:3001:VIR:H17	1.74	0.87
1:AA:980:C:OP2	57:AA:1835:HOH:O	1.91	0.87
22:BA:1180:U:O2'	22:BA:1181:U:OP1	1.92	0.87
22:DA:2093:G:H4'	29:DH:25:TYR:H	1.38	0.87
22:DA:2506:U:C4	22:DA:2585:U:O4	2.28	0.87
14:AN:64:CYS:SG	14:AN:67:THR:OG1	2.28	0.87
1:AA:1222:G:O6	57:AA:1835:HOH:O	1.91	0.87
4:AD:100:ASN:OD1	4:AD:111:ARG:NH1	2.07	0.87
1:CA:684:U:O2'	11:CK:40:ASN:O	1.93	0.87
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.87
22:BA:2742:G:O6	57:BA:3796:HOH:O	1.92	0.86
22:BA:1309:G:H4'	50:B2:7:PRO:HB2	1.57	0.86
12:CL:25:GLU:O	12:CL:27:CYS:N	2.09	0.86
22:DA:784:G:OP2	57:DA:3309:HOH:O	1.94	0.86
22:DA:528:A:OP1	57:DA:3245:HOH:O	1.93	0.86
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.04	0.86
3:AC:14:ILE:O	3:AC:16:LYS:N	2.08	0.86
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.86
22:DA:790:U:OP2	57:DA:3752:HOH:O	1.93	0.86
22:DA:2032:G:N7	57:DA:3529:HOH:O	2.07	0.86
14:AN:90:ARG:NH1	14:AN:92:GLU:OE2	2.08	0.86
22:DA:1187:G:N7	57:DA:3574:HOH:O	2.07	0.86
22:DA:821:A:O3'	57:DA:3341:HOH:O	1.94	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:79:G:N2	1:AA:91:U:O4	2.09	0.85
22:BA:481:G:C4	22:BA:507:A:C2	2.65	0.85
22:DA:1013:C:OP2	57:DA:3596:HOH:O	1.94	0.85
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.10	0.85
22:DA:299:A:N3	22:DA:319:G:O2'	2.09	0.85
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.10	0.85
22:DA:422:A:OP2	57:DA:3556:HOH:O	1.94	0.85
15:AO:64:ARG:NH2	15:AO:68:ASP:OD1	2.09	0.85
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.10	0.85
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.09	0.85
20:CT:5:LYS:O	20:CT:7:ALA:N	2.09	0.85
22:DA:2199:A:H1'	29:DH:28:ASN:HD22	1.40	0.85
22:BA:1509:A:O2'	22:BA:1510:G:OP2	1.95	0.84
13:AM:31:LYS:NZ	13:AM:41:GLU:OE1	2.10	0.84
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.11	0.84
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.10	0.84
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.08	0.84
12:CL:116:LYS:O	12:CL:117:TYR:CG	2.30	0.84
22:DA:1619:G:N7	57:DA:3640:HOH:O	2.09	0.84
1:CA:1097:C:OP1	2:CB:139:ARG:NH2	2.10	0.84
22:BA:1917:U:C4	22:BA:1918:A:C4	2.65	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.07	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.84
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
1:AA:702:A:N6	22:BA:1846:G:O2'	2.11	0.84
12:AL:21:VAL:HG23	12:AL:95:TYR:CE2	2.13	0.84
22:DA:182:A:O2'	22:DA:433:C:O2'	1.95	0.84
22:DA:2144:G:N2	22:DA:2148:G:O6	2.11	0.84
14:AN:33:ASP:O	14:AN:35:ASN:N	2.11	0.83
22:BA:1973:G:OP1	57:BA:3467:HOH:O	1.95	0.83
17:CQ:21:ILE:N	17:CQ:48:ASP:OD2	2.11	0.83
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.13	0.83
22:DA:1378:A:O2'	22:DA:1380:G:N7	2.11	0.83
1:AA:452:A:N6	1:AA:480:U:O2	2.12	0.83
11:AK:29:ASN:OD1	11:AK:30:THR:N	2.12	0.83
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.83
1:AA:1500:A:OP2	57:AA:1870:HOH:O	1.95	0.83
22:BA:1070:A:O2'	22:BA:1097:U:OP1	1.96	0.83
22:DA:2579:C:OP1	57:DA:3536:HOH:O	1.95	0.83
22:DA:2162:G:H4'	22:DA:2163:A:OP1	1.79	0.83
22:BA:1779:U:H5	22:BA:1784:A:N7	1.76	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1917:U:C5	22:BA:1918:A:C5	2.66	0.83
29:BH:123:ARG:NH2	1:CA:367:U:O5'	2.12	0.83
1:AA:1031:C:O2'	1:AA:1032:G:OP2	1.97	0.82
5:CE:102:GLY:O	5:CE:104:GLY:N	2.12	0.82
1:AA:536:C:OP1	57:AA:1882:HOH:O	1.96	0.82
1:CA:484:G:H4'	1:CA:485:U:O5'	1.78	0.82
1:CA:1049:U:OP1	57:CA:1846:HOH:O	1.96	0.82
17:AQ:17:MET:SD	17:AQ:17:MET:N	2.52	0.82
22:BA:2005:A:OP1	57:BA:3384:HOH:O	1.98	0.82
5:CE:99:ALA:O	5:CE:101:GLU:N	2.12	0.82
22:DA:450:G:O6	57:DA:3241:HOH:O	1.96	0.82
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.21	0.82
22:BA:1275:A:N1	22:BA:1295:C:O2'	2.13	0.82
22:BA:2061:G:OP2	57:BA:3494:HOH:O	1.97	0.82
32:BK:70:ARG:NH1	32:BK:74:GLY:O	2.12	0.82
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.28	0.82
22:DA:18:U:O4	57:DA:3205:HOH:O	1.97	0.82
22:BA:576:U:OP1	57:BA:3674:HOH:O	1.97	0.82
3:CC:155:GLY:O	3:CC:157:LEU:N	2.12	0.82
22:BA:1916:A:N3	22:BA:1917:U:H1'	1.94	0.82
22:DA:118:A:C8	22:DA:119:A:C8	2.68	0.82
22:BA:999:U:P	57:BA:3363:HOH:O	2.38	0.81
1:CA:736:C:OP1	18:CR:61:ARG:NH1	2.13	0.81
22:DA:2057:G:OP2	57:DA:3483:HOH:O	1.97	0.81
1:CA:533:A:OP1	57:CA:1763:HOH:O	1.98	0.81
1:CA:558:G:OP1	57:CA:1729:HOH:O	1.97	0.81
2:CB:15:HIS:O	2:CB:17:GLY:N	2.13	0.81
22:DA:1377:G:OP2	57:DA:3391:HOH:O	1.97	0.81
1:AA:1145:A:O2'	1:AA:1146:A:O5'	1.98	0.81
1:CA:645:G:N7	57:CA:1790:HOH:O	2.13	0.81
4:CD:70:ARG:O	4:CD:74:ASN:ND2	2.12	0.81
2:AB:73:LYS:O	2:AB:75:ALA:N	2.13	0.81
22:DA:1667:G:O2'	22:DA:1991:U:O4	1.97	0.81
22:DA:2006:C:OP1	57:DA:3375:HOH:O	1.98	0.81
22:BA:1845:G:OP1	24:BC:256:LYS:NZ	2.14	0.81
12:CL:25:GLU:O	12:CL:26:ALA:C	2.24	0.81
22:DA:185:G:C6	22:DA:212:G:C2	2.69	0.81
22:BA:500:G:N2	22:BA:502:A:H3'	1.96	0.81
22:BA:517:C:OP2	48:B0:10:ARG:NH2	2.14	0.81
1:AA:405:U:O4	4:AD:2:ALA:N	2.14	0.81
22:DA:2056:G:OP2	57:DA:3483:HOH:O	1.98	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.12	0.80
22:DA:2115:G:HO2'	22:DA:2117:A:N6	1.79	0.80
6:CF:91:ARG:O	6:CF:92:THR:OG1	1.97	0.80
22:DA:310:A:O2'	22:DA:311:A:OP2	1.99	0.80
22:DA:2843:G:N2	22:DA:2875:C:C2	2.49	0.80
22:DA:1995:U:OP1	57:DA:3804:HOH:O	1.98	0.80
40:DS:28:LYS:O	40:DS:30:SER:N	2.14	0.80
29:BH:123:ARG:NH2	1:CA:367:U:P	2.46	0.80
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.65	0.80
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.15	0.80
22:DA:2714:G:OP2	57:DA:3544:HOH:O	1.99	0.80
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.11	0.80
22:BA:999:U:OP2	57:BA:3363:HOH:O	2.00	0.80
22:BA:2728:U:HO2'	22:BA:2729:G:P	2.04	0.80
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.15	0.80
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.15	0.79
22:BA:1187:G:OP2	57:BA:3371:HOH:O	2.00	0.79
2:AB:115:LYS:O	2:AB:117:LEU:N	2.15	0.79
22:BA:783:A:O2'	22:BA:785:G:OP1	2.00	0.79
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.64	0.79
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.97	0.79
24:DC:2:ALA:N	24:DC:199:GLU:OE1	2.14	0.79
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.82	0.79
22:BA:1603:A:OP1	57:BA:3413:HOH:O	1.99	0.79
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.79
1:CA:978:A:OP2	1:CA:1362:A:N6	2.15	0.79
1:AA:263:A:OP2	20:AT:74:ARG:NH1	2.16	0.79
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.01	0.79
25:DD:140:HIS:NE2	57:DD:303:HOH:O	2.13	0.79
1:AA:67:C:O2'	1:AA:171:A:N3	2.15	0.79
22:DA:732:C:OP2	57:DA:3295:HOH:O	2.00	0.79
22:BA:2800:A:H3'	22:BA:2801:G:H5'	1.64	0.79
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.12	0.79
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.79
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.13	0.79
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.36	0.79
47:BZ:40:ASP:OD2	47:BZ:45:ARG:NH1	2.16	0.79
27:BF:40:VAL:O	27:BF:42:GLU:N	2.16	0.79
22:DA:2125:G:N1	22:DA:2171:A:OP1	2.16	0.79
21:AU:35:ARG:O	21:AU:37:PHE:N	2.16	0.78
1:CA:515:G:N7	57:CA:1765:HOH:O	2.15	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:27:G:O2'	22:DA:28:A:OP2	2.01	0.78
22:DA:1509:A:O2'	22:DA:1510:G:OP2	2.01	0.78
25:DD:30:GLU:O	25:DD:52:THR:OG1	2.01	0.78
22:BA:118:A:C8	22:BA:119:A:C8	2.70	0.78
29:BH:83:LYS:HG3	1:CA:55:A:N3	1.98	0.78
24:DC:204:VAL:O	24:DC:206:GLY:N	2.15	0.78
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.82	0.78
27:BF:52:ASN:ND2	27:BF:147:ASP:OD2	2.15	0.78
12:CL:34:CYS:HA	12:CL:55:VAL:HA	1.64	0.78
22:DA:1344:U:O2'	22:DA:1345:C:OP2	2.01	0.78
22:DA:1607:C:N4	22:DA:1622:G:N7	2.30	0.78
23:DB:34:A:N6	23:DB:44:G:O2'	2.16	0.78
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.17	0.78
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.15	0.78
22:BA:2287:A:OP1	49:B1:30:LYS:NZ	2.17	0.78
22:BA:511:U:C5	22:BA:512:G:C5	2.70	0.78
22:DA:2504:U:C5	55:DA:3001:VIR:C16	2.67	0.78
5:CE:96:MET:HE3	5:CE:111:MET:HE3	1.66	0.78
32:DK:30:ARG:NH2	32:DK:37:ASP:OD1	2.17	0.78
29:BH:86:ASP:HB2	1:CA:359:G:O2'	1.82	0.78
1:CA:412:A:HO2'	1:CA:413:G:P	2.07	0.78
22:BA:563:A:C2	22:BA:564:C:C2	2.71	0.78
22:BA:572:A:H5"	22:BA:573:U:OP2	1.82	0.78
22:BA:571:U:C5	22:BA:575:A:C5	2.72	0.78
22:DA:381:G:OP1	45:DX:18:ARG:NH2	2.17	0.78
23:DB:29:A:O2'	23:DB:58:A:N1	2.15	0.77
6:AF:7:VAL:O	6:AF:7:VAL:HG22	1.83	0.77
28:BG:174:ALA:O	28:BG:175:LYS:HB3	1.83	0.77
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.09	0.77
1:CA:209:U:H4'	1:CA:210:C:OP2	1.85	0.77
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.17	0.77
22:BA:2448:A:OP2	57:BA:3689:HOH:O	2.01	0.77
22:BA:2728:U:O2'	22:BA:2729:G:P	2.42	0.77
1:CA:1007:U:O4	1:CA:1022:A:N6	2.17	0.77
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.19	0.77
49:D1:15:ALA:O	49:D1:17:THR:N	2.17	0.77
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.17	0.77
1:AA:1397:C:O2'	1:AA:1398:A:OP1	2.02	0.77
1:CA:706:A:C5	1:CA:707:U:C5	2.72	0.77
4:CD:62:ARG:NH1	4:CD:69:GLU:OE1	2.17	0.77
22:DA:2261:C:C2	22:DA:2280:G:N2	2.53	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1003:G:N2	1:AA:1037:C:O2	2.17	0.77
25:DD:151:THR:O	25:DD:152:PRO:C	2.23	0.77
22:BA:1124:G:N7	57:BA:3609:HOH:O	2.17	0.77
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.85	0.77
1:AA:875:U:O2'	8:AH:15:ARG:NH1	2.17	0.77
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.77
9:AI:57:MET:SD	9:AI:58:VAL:N	2.58	0.77
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.18	0.77
22:DA:161:A:H3'	22:DA:162:U:H5"	1.67	0.77
22:DA:2091:C:H3'	22:DA:2092:U:H5"	1.67	0.77
1:CA:249:U:HO2'	1:CA:252:U:HO2'	1.24	0.76
6:CF:81:ASN:OD1	6:CF:83:ALA:N	2.19	0.76
22:DA:1464:G:N7	57:DA:3633:HOH:O	2.18	0.76
22:DA:2504:U:C5	55:DA:3001:VIR:H162	2.21	0.76
1:AA:1350:A:OP1	9:AI:123:ARG:NE	2.18	0.76
22:BA:2189:U:H2'	22:BA:2190:G:C1'	2.15	0.76
29:BH:89:LYS:HG2	1:CA:359:G:OP1	1.86	0.76
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.19	0.76
22:DA:187:G:C2	22:DA:210:C:C2	2.73	0.76
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.21	0.76
22:BA:1916:A:O5'	22:BA:1917:U:OP2	2.02	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
22:DA:380:G:N2	22:DA:395:U:O2	2.19	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.19	0.76
22:BA:744:U:OP1	57:BA:3656:HOH:O	2.03	0.76
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.03	0.76
4:AD:22:LYS:O	4:AD:24:GLY:N	2.19	0.76
39:BR:49:ILE:HB	39:BR:52:PRO:C	2.11	0.76
22:DA:488:G:N2	22:DA:493:G:O6	2.18	0.76
1:AA:64:G:C8	1:AA:99:C:N4	2.54	0.76
22:BA:370:G:N7	57:BA:3563:HOH:O	2.19	0.76
22:BA:528:A:C8	22:BA:528:A:H3'	2.21	0.76
11:CK:17:SER:O	11:CK:80:LYS:N	2.19	0.76
22:DA:827:U:OP2	57:DA:3695:HOH:O	2.04	0.76
20:AT:69:LYS:O	20:AT:71:LYS:N	2.18	0.76
22:BA:1605:C:H2'	22:BA:1606:C:H5'	1.66	0.76
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.16	0.76
1:CA:71:A:C2	1:CA:72:A:C8	2.74	0.76
1:AA:965:U:OP2	57:AA:1831:HOH:O	2.03	0.75
1:CA:966:G:O2'	9:CI:130:ARG:OXT	2.04	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2268:A:OP1	57:DA:3505:HOH:O	2.04	0.75
23:DB:31:C:O2'	23:DB:53:A:N1	2.18	0.75
41:DT:17:SER:O	41:DT:19:LYS:N	2.19	0.75
27:BF:2:ALA:O	27:BF:4:LEU:N	2.19	0.75
1:CA:32:A:C2	1:CA:33:A:C5	2.75	0.75
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.75
40:DS:66:ILE:O	40:DS:68:ASP:N	2.19	0.75
22:BA:15:G:OP2	57:BA:3553:HOH:O	2.04	0.75
22:BA:1266:G:OP1	48:B0:16:ARG:NE	2.19	0.75
22:BA:1776:G:OP2	57:BA:3451:HOH:O	2.05	0.75
22:DA:1340:U:C4	22:DA:1603:A:C8	2.75	0.75
27:BF:36:LEU:HD21	27:BF:99:PHE:CE2	2.22	0.75
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.02	0.75
22:DA:2498:C:OP2	57:DA:3680:HOH:O	2.05	0.75
45:DX:33:LEU:O	45:DX:34:HIS:ND1	2.19	0.75
22:DA:668:A:N6	22:DA:670:A:O2'	2.18	0.75
22:BA:770:G:N7	57:BA:3724:HOH:O	2.19	0.75
22:BA:2057:G:OP2	57:BA:3490:HOH:O	2.04	0.75
24:BC:260:ASN:O	24:BC:262:ARG:N	2.19	0.75
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.21	0.75
22:DA:2057:G:OP1	57:DA:3667:HOH:O	2.04	0.75
22:BA:2886:A:C5	22:BA:2887:A:C8	2.74	0.75
22:BA:1450:G:C6	22:BA:1451:C:N4	2.55	0.74
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.85	0.74
39:DR:82:HIS:ND1	39:DR:82:HIS:O	2.20	0.74
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.87	0.74
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.03	0.74
22:BA:528:A:H2'	22:BA:529:A:H5"	1.67	0.74
22:BA:2048:G:O6	57:BA:3682:HOH:O	2.05	0.74
22:DA:1266:G:O2'	22:DA:2012:G:O6	2.02	0.74
22:DA:1269:A:OP2	57:DA:3377:HOH:O	2.04	0.74
1:CA:1004:A:O2'	1:CA:1036:A:N1	2.18	0.74
22:DA:822:G:OP2	57:DA:3343:HOH:O	2.05	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
22:BA:1069:A:N1	22:BA:1073:A:N6	2.34	0.74
22:DA:2004:G:OP2	57:DA:3797:HOH:O	2.04	0.74
36:BO:64:TYR:O	36:BO:67:ASN:ND2	2.21	0.74
14:AN:46:LEU:O	14:AN:48:LEU:N	2.20	0.74
22:BA:998:C:O3'	57:BA:3363:HOH:O	2.04	0.74
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2551:C:OP2	57:DA:3718:HOH:O	2.06	0.74
22:DA:2592:G:OP1	57:DA:3458:HOH:O	2.04	0.74
22:DA:2094:A:C5'	29:DH:25:TYR:CG	2.70	0.74
46:DY:45:GLN:O	46:DY:47:ARG:N	2.21	0.74
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.87	0.73
22:DA:587:C:OP2	33:DL:21:ARG:NH1	2.21	0.73
22:DA:196:A:O2'	22:DA:805:G:O6	2.02	0.73
22:DA:842:U:O4	57:DA:3577:HOH:O	2.05	0.73
22:DA:2128:G:O6	22:DA:2160:C:N4	2.21	0.73
55:DA:3001:VIR:H311	55:DA:3001:VIR:H352	1.68	0.73
1:AA:516:U:O4	57:AA:1847:HOH:O	2.04	0.73
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.70	0.73
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.36	0.73
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	1.88	0.73
22:BA:1371:G:N7	57:BA:3403:HOH:O	2.21	0.73
22:BA:1925:C:H4'	22:BA:1926:U:C4	2.23	0.73
22:DA:334:C:OP1	22:DA:335:C:N4	2.22	0.73
1:CA:152:A:N6	1:CA:170:U:C2	2.56	0.73
1:CA:976:G:OP2	1:CA:1358:U:O2'	2.05	0.73
33:BL:79:LEU:HB2	33:BL:114:GLY:O	1.88	0.73
22:DA:53:A:C8	22:DA:54:G:C8	2.77	0.73
22:DA:108:G:O2'	22:DA:347:A:N3	2.20	0.73
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.22	0.73
33:DL:102:GLY:N	57:DL:202:HOH:O	2.21	0.73
41:DT:21:SER:O	41:DT:23:ALA:N	2.21	0.73
1:AA:455:G:C2	1:AA:478:A:C2	2.76	0.73
22:DA:466:A:N1	22:DA:795:C:O2'	2.22	0.73
22:BA:1071:G:C8	22:BA:1089:A:N6	2.57	0.73
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.62	0.73
22:BA:2757:A:N1	28:BG:67:THR:HG21	2.04	0.73
22:DA:826:U:O2'	33:DL:53:GLY:HA3	1.89	0.73
22:DA:978:G:N7	57:DA:3587:HOH:O	2.21	0.73
2:AB:167:ASP:OD1	2:AB:168:HIS:N	2.21	0.72
3:AC:139:GLN:O	3:AC:141:ALA:N	2.22	0.72
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.24	0.72
22:DA:910:A:N3	22:DA:2264:C:O2'	2.22	0.72
22:DA:1843:C:H4'	24:DC:251:GLN:CD	2.13	0.72
2:CB:193:PRO:O	2:CB:195:GLY:N	2.22	0.72
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.24	0.72
47:DZ:8:THR:OG1	47:DZ:35:THR:OG1	2.07	0.72
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:83:A:OP2	42:DU:92:LYS:NZ	2.20	0.72
22:DA:1530:G:N2	22:DA:1542:U:O2	2.22	0.72
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.22	0.72
31:BJ:19:ASP:O	31:BJ:23:LYS:HE2	1.90	0.72
33:DL:93:ASN:O	33:DL:95:LEU:N	2.22	0.72
1:AA:1014:A:N3	19:AS:34:TRP:CH2	2.57	0.72
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.89	0.72
41:DT:27:SER:O	41:DT:29:THR:N	2.22	0.72
45:DX:54:LYS:O	45:DX:57:ARG:N	2.21	0.72
7:AG:27:VAL:HG12	7:AG:43:VAL:HG21	1.71	0.72
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.38	0.72
1:AA:1406:U:C5	1:AA:1407:C:C5	2.77	0.72
22:DA:2594:C:N4	22:DA:2595:G:O6	2.23	0.72
31:DJ:41:LYS:O	31:DJ:43:GLU:N	2.22	0.72
4:AD:168:PRO:O	4:AD:169:THR:OG1	2.06	0.72
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.24	0.72
22:DA:2199:A:C1'	29:DH:28:ASN:HD21	2.00	0.72
22:DA:2838:G:O2'	35:DN:45:ARG:NH1	2.22	0.72
1:AA:212:G:N2	1:AA:213:G:C4	2.58	0.72
22:BA:783:A:C2'	22:BA:785:G:OP1	2.38	0.72
22:BA:783:A:H2'	22:BA:785:G:OP1	1.90	0.72
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.25	0.72
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.23	0.72
22:DA:608:A:H2'	22:DA:609:A:C8	2.25	0.72
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.04	0.72
22:BA:1619:G:N7	57:BA:3649:HOH:O	2.22	0.72
22:BA:2428:G:H5"	22:BA:2429:G:OP1	1.90	0.72
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.72	0.72
32:BK:78:ARG:NH1	37:BP:71:GLU:OE2	2.22	0.72
6:CF:88:MET:HE3	18:CR:64:TYR:CD2	2.25	0.72
26:DE:58:LYS:NZ	26:DE:70:SER:O	2.23	0.72
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.05	0.72
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.19	0.71
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	1.90	0.71
1:CA:412:A:HO2'	1:CA:413:G:C5'	2.03	0.71
22:DA:526:A:O5'	57:DA:3246:HOH:O	2.07	0.71
22:DA:820:A:N1	57:DA:3768:HOH:O	2.22	0.71
22:DA:1088:A:N6	30:DI:135:SER:OG	2.23	0.71
22:BA:2786:U:OP1	25:BD:70:LYS:NZ	2.20	0.71
22:DA:733:G:OP2	57:DA:3293:HOH:O	2.06	0.71
22:DA:740:C:H5'	22:DA:1784:A:C2'	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1359:A:C8	22:DA:1373:A:N1	2.58	0.71
1:AA:109:A:H2'	1:AA:326:G:N2	2.05	0.71
22:DA:449:A:OP2	57:DA:3242:HOH:O	2.08	0.71
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.05	0.71
1:CA:939:G:OP1	7:CG:95:ARG:NH2	2.24	0.71
22:DA:1376:C:O5'	57:DA:3395:HOH:O	2.07	0.71
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.71
1:AA:154:U:C2	1:AA:168:G:N2	2.58	0.71
22:BA:571:U:C5	22:BA:575:A:C6	2.78	0.71
47:BZ:10:THR:HG22	47:BZ:54:MET:C	2.15	0.71
2:CB:134:ALA:O	2:CB:138:THR:OG1	2.03	0.71
9:CI:102:GLY:O	9:CI:104:VAL:N	2.24	0.71
22:DA:998:C:OP2	38:DQ:58:ARG:NH2	2.23	0.71
37:DP:89:ARG:NH1	37:DP:115:ASN:OXT	2.23	0.71
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.26	0.71
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.20	0.71
22:DA:1477:A:N6	22:DA:1514:G:O2'	2.24	0.71
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.09	0.71
31:DJ:99:ARG:NH1	31:DJ:102:GLU:OE1	2.23	0.71
22:BA:1360:G:OP2	57:BA:3620:HOH:O	2.09	0.71
22:BA:1921:G:C2	22:BA:1922:G:C8	2.79	0.71
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.64	0.71
1:CA:182:A:C5	1:CA:184:G:N7	2.59	0.71
1:CA:1266:G:N2	1:CA:1269:A:OP2	2.23	0.71
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.25	0.71
12:CL:66:TYR:O	12:CL:97:THR:OG1	2.09	0.71
22:DA:2093:G:O2'	29:DH:25:TYR:HA	1.91	0.71
22:DA:2198:A:C4	29:DH:29:PHE:HB2	2.26	0.71
5:AE:157:ARG:O	5:AE:159:LYS:N	2.23	0.71
16:CP:23:ASP:O	16:CP:25:ARG:N	2.23	0.71
1:AA:652:U:O4	1:AA:752:G:O2'	2.07	0.70
22:BA:509:C:O3'	57:BA:3777:HOH:O	2.09	0.70
1:CA:411:A:C6	1:CA:429:U:C5	2.79	0.70
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.07	0.70
4:CD:46:PRO:O	4:CD:47:ARG:C	2.35	0.70
5:CE:137:VAL:O	5:CE:138:ARG:HB2	1.89	0.70
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.26	0.70
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.26	0.70
22:BA:301:G:OP2	42:BU:82:ARG:NH1	2.23	0.70
22:BA:1918:A:O2'	22:BA:1920:C:N4	2.24	0.70
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1317:C:OP1	14:CN:56:SER:OG	2.09	0.70
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.21	0.70
33:BL:87:GLY:O	33:BL:89:VAL:N	2.22	0.70
1:CA:55:A:C6	1:CA:56:U:C2	2.80	0.70
1:CA:667:G:OP1	1:CA:732:C:O2'	2.08	0.70
22:DA:2407:A:OP2	57:DA:3558:HOH:O	2.09	0.70
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.73	0.70
27:BF:158:THR:O	57:BF:201:HOH:O	2.09	0.70
22:DA:362:A:C4	22:DA:363:G:C8	2.80	0.70
22:DA:1378:A:O2'	57:DA:3749:HOH:O	2.08	0.70
3:AC:85:GLU:OE1	3:AC:88:ARG:NH1	2.24	0.70
3:AC:205:GLY:O	3:AC:206:GLU:HG3	1.90	0.70
17:AQ:4:LYS:HD2	17:AQ:4:LYS:O	1.91	0.70
22:BA:797:G:N7	57:BA:3321:HOH:O	2.23	0.70
22:BA:1922:G:N2	22:BA:1923:U:O4'	2.23	0.70
22:DA:1209:U:O2	22:DA:1210:G:N2	2.23	0.70
22:DA:2415:G:C6	22:DA:2416:C:C4	2.80	0.70
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.31	0.70
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.09	0.70
53:B5:48:LEU:HA	53:B5:208:THR:CB	2.22	0.70
22:DA:1651:G:N2	22:DA:2007:U:O2	2.25	0.70
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.27	0.70
22:BA:250:G:C6	22:BA:251:A:C6	2.80	0.70
1:CA:495:A:C2	1:CA:496:A:C6	2.79	0.70
22:DA:593:U:H2'	22:DA:594:U:C6	2.27	0.70
1:AA:872:A:C4	1:AA:874:G:N7	2.60	0.70
4:AD:59:GLN:O	4:AD:63:ARG:HG2	1.92	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.54	0.70
53:B5:65:LEU:O	53:B5:67:HIS:N	2.25	0.70
1:CA:632:U:O2	1:CA:632:U:H2'	1.92	0.70
22:DA:2504:U:C5	55:DA:3001:VIR:H161	2.26	0.70
1:AA:799:G:O6	57:AA:1815:HOH:O	2.09	0.70
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.27	0.70
1:CA:728:A:H2'	1:CA:729:A:C8	2.27	0.70
5:CE:82:GLN:OE1	5:CE:150:PRO:HD3	1.91	0.70
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.24	0.70
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.25	0.70
31:DJ:41:LYS:O	31:DJ:44:TYR:N	2.23	0.70
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.72	0.69
29:BH:123:ARG:CZ	1:CA:367:U:OP2	2.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:115:LEU:O	5:CE:120:VAL:HG23	1.91	0.69
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.07	0.69
22:DA:2811:G:H2'	22:DA:2812:G:O4'	1.91	0.69
1:AA:1014:A:C2	19:AS:34:TRP:CH2	2.80	0.69
30:BI:122:ILE:O	30:BI:126:THR:OG1	2.10	0.69
12:CL:92:GLY:O	12:CL:94:ARG:N	2.24	0.69
22:DA:1006:C:OP2	57:DA:3777:HOH:O	2.09	0.69
20:AT:29:ARG:O	20:AT:33:LYS:HG2	1.92	0.69
22:DA:489:G:H4'	22:DA:490:C:OP1	1.92	0.69
22:DA:1153:C:P	57:DA:3356:HOH:O	2.49	0.69
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.27	0.69
7:AG:55:GLY:O	7:AG:57:SER:N	2.25	0.69
22:BA:981:A:OP1	57:BA:3597:HOH:O	2.09	0.69
22:BA:2063:C:O2	22:BA:2450:A:N1	2.26	0.69
1:CA:1072:G:C6	1:CA:1073:U:C4	2.81	0.69
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.74	0.69
35:DN:79:LEU:O	35:DN:81:ASN:N	2.26	0.69
1:AA:781:A:OP2	57:AA:1812:HOH:O	2.10	0.69
11:AK:126:LYS:C	21:AU:34:ARG:NH2	2.51	0.69
22:BA:990:A:H5"	22:BA:991:C:OP1	1.93	0.69
22:BA:1421:G:C2	22:BA:1422:G:C8	2.81	0.69
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.74	0.69
17:AQ:60:GLU:OE2	17:AQ:77:ARG:NH1	2.26	0.69
22:BA:2190:G:C2	22:BA:2191:A:C4	2.80	0.69
50:B2:43:THR:O	50:B2:44:VAL:CB	2.41	0.69
22:DA:526:A:N6	22:DA:2626:C:H4'	2.07	0.69
22:DA:2209:G:C2	22:DA:2216:G:C2	2.80	0.69
20:AT:6:SER:OG	20:AT:7:ALA:N	2.24	0.69
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.69
1:CA:980:C:N3	57:CA:1845:HOH:O	2.25	0.69
14:CN:61:ARG:O	14:CN:62:ASN:HB2	1.92	0.69
22:DA:301:G:C2	22:DA:302:C:C2	2.81	0.69
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.41	0.69
22:DA:1342:A:OP2	57:DA:3710:HOH:O	2.09	0.69
22:DA:1671:U:OP2	57:DA:3430:HOH:O	2.11	0.69
1:AA:131:A:H2'	1:AA:132:C:C6	2.27	0.69
22:BA:1180:U:HO2'	22:BA:1181:U:P	2.15	0.69
33:BL:61:LEU:O	51:B3:13:ARG:HD3	1.92	0.69
22:DA:118:A:N3	22:DA:178:G:H1'	2.08	0.69
22:DA:764:A:N1	22:DA:1789:A:O2'	2.25	0.69
22:DA:2055:C:OP2	57:DA:3569:HOH:O	2.09	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:90:C:C2	1:AA:91:U:C5	2.81	0.69
1:AA:979:C:OP1	57:AA:1835:HOH:O	2.10	0.69
1:AA:1014:A:N7	1:AA:1015:G:C5	2.61	0.69
2:CB:206:ALA:O	2:CB:208:ARG:N	2.26	0.69
6:CF:45:ARG:O	6:CF:56:LYS:HA	1.93	0.69
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.24	0.69
22:DA:2136:G:N1	22:DA:2156:G:H1'	2.08	0.69
12:AL:24:LEU:O	12:AL:25:GLU:C	2.35	0.69
22:BA:1061:U:O2'	22:BA:1062:G:O5'	2.10	0.69
13:CM:40:ALA:O	13:CM:42:ASP:N	2.26	0.69
22:DA:289:G:C2	22:DA:352:A:C2	2.81	0.69
22:DA:813:U:H2'	22:DA:814:C:C6	2.29	0.69
22:DA:995:C:O2	31:DJ:3:THR:OG1	2.10	0.69
1:AA:468:A:C2	1:AA:469:C:C4	2.80	0.68
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.28	0.68
22:BA:2325:G:C6	22:BA:2326:C:N4	2.61	0.68
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.71	0.68
1:CA:1198:G:OP1	57:CA:1837:HOH:O	2.11	0.68
6:CF:97:THR:O	6:CF:98:GLU:HB3	1.93	0.68
22:DA:247:G:H4'	22:DA:386:G:C4	2.29	0.68
22:DA:2484:G:OP1	34:DM:44:ARG:NH2	2.25	0.68
35:DN:1:MET:O	35:DN:3:HIS:N	2.27	0.68
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.76	0.68
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.08	0.68
22:DA:1096:A:H2'	22:DA:1097:U:O4'	1.94	0.68
11:AK:69:ARG:HD2	22:BA:2146:C:N3	2.08	0.68
22:BA:2127:G:H4'	22:BA:2128:G:OP1	1.93	0.68
22:DA:1265:A:OP1	57:DA:3743:HOH:O	2.11	0.68
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.75	0.68
22:DA:2126:A:O2'	22:DA:2162:G:O6	2.11	0.68
24:DC:62:TYR:CE2	24:DC:63:ARG:O	2.47	0.68
1:AA:80:A:C2	1:AA:90:C:N3	2.62	0.68
22:BA:1936:A:H2	22:BA:1943:U:H3	1.39	0.68
48:B0:34:SER:OG	48:B0:36:GLU:HG3	1.93	0.68
1:CA:374:A:H5"	1:CA:452:A:N1	2.08	0.68
17:CQ:48:ASP:N	17:CQ:48:ASP:OD1	2.24	0.68
22:DA:2575:C:OP2	57:DA:3706:HOH:O	2.10	0.68
1:AA:91:U:H2'	1:AA:92:U:O4'	1.93	0.68
9:AI:25:ASN:N	9:AI:62:ASP:OD1	2.27	0.68
22:BA:451:U:OP2	57:BA:3238:HOH:O	2.12	0.68
22:BA:587:C:C6	22:BA:671:C:H1'	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:552:U:C4	1:CA:553:A:N7	2.62	0.68
1:AA:466:A:H5'	1:AA:467:U:OP2	1.92	0.68
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.24	0.68
23:BB:33:G:O2'	23:BB:34:A:H5'	1.94	0.68
24:BC:117:GLN:N	24:BC:128:ASN:OD1	2.25	0.68
1:AA:1145:A:O2'	1:AA:1146:A:P	2.52	0.68
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.45	0.68
4:AD:23:SER:O	4:AD:24:GLY:O	2.12	0.68
22:BA:2023:C:C2'	22:BA:2024:G:H5'	2.23	0.68
26:BE:7:ASP:O	26:BE:9:GLN:N	2.27	0.68
27:BF:105:THR:CG2	27:BF:106:ILE:HG23	2.23	0.68
29:BH:97:ARG:HD3	1:CA:370:C:H5'	1.76	0.68
22:DA:1509:A:C4	22:DA:1510:G:C8	2.81	0.68
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.74	0.68
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.26	0.68
26:BE:25:GLU:O	26:BE:26:ALA:C	2.37	0.68
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.76	0.68
1:CA:527:G:C2	1:CA:528:C:C6	2.82	0.68
4:CD:145:ILE:HG21	4:CD:150:LYS:HA	1.74	0.68
22:DA:2199:A:O4'	29:DH:28:ASN:CG	2.36	0.68
22:DA:2726:A:O2'	22:DA:2727:A:O5'	2.12	0.68
25:DD:33:ARG:NH2	25:DD:74:GLU:O	2.27	0.68
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.26	0.68
22:DA:247:G:H4'	22:DA:386:G:C5	2.29	0.68
22:DA:912:C:N4	22:DA:913:U:O4	2.27	0.68
9:AI:30:ILE:HD11	9:AI:38:TYR:CD1	2.30	0.67
22:BA:1754:A:C6	22:BA:1755:A:C6	2.82	0.67
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.09	0.67
14:CN:91:GLY:O	14:CN:93:ILE:N	2.27	0.67
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.08	0.67
44:DW:33:ALA:N	44:DW:64:ASP:OD1	2.27	0.67
11:AK:102:ALA:O	11:AK:104:GLY:N	2.27	0.67
22:BA:1277:G:H4'	35:BN:20:MET:HE2	1.76	0.67
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.09	0.67
1:CA:1361:G:C3'	1:CA:1362:A:H5"	2.24	0.67
2:CB:16:PHE:CE2	2:CB:18:HIS:CE1	2.82	0.67
9:CI:41:ARG:O	9:CI:45:ARG:NH1	2.27	0.67
22:DA:856:G:N2	22:DA:922:C:C2	2.62	0.67
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.95	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:29:ASP:O	4:CD:31:LYS:N	2.25	0.67
17:CQ:8:LEU:HB2	17:CQ:61:ILE:CG2	2.24	0.67
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.27	0.67
22:DA:320:A:H4'	22:DA:322:A:N7	2.09	0.67
22:DA:2725:A:C4	22:DA:2727:A:C8	2.81	0.67
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.27	0.67
22:BA:1079:C:C5	22:BA:1088:A:C2	2.82	0.67
22:BA:1187:G:H5'	39:BR:83:TYR:CE2	2.29	0.67
22:BA:1429:G:O2'	22:BA:1430:G:H5'	1.94	0.67
22:BA:1907:G:C5	22:BA:1908:C:C5	2.83	0.67
26:BE:119:ILE:HB	26:BE:187:VAL:CG2	2.25	0.67
29:BH:97:ARG:NH1	1:CA:370:C:O4'	2.26	0.67
32:BK:113:MET:O	32:BK:116:ILE:HG13	1.93	0.67
46:BY:21:LEU:O	46:BY:22:LEU:O	2.11	0.67
4:CD:148:LYS:O	4:CD:149:ALA:HB3	1.93	0.67
22:DA:2504:U:C6	55:DA:3001:VIR:H161	2.29	0.67
5:AE:81:LEU:HD12	5:AE:147:MET:SD	2.35	0.67
22:BA:245:G:N7	51:B3:8:ARG:NH1	2.42	0.67
28:BG:30:ASN:CG	28:BG:30:ASN:O	2.36	0.67
22:DA:2111:U:C4	22:DA:2145:C:H2'	2.29	0.67
22:DA:2834:G:O6	22:DA:2879:A:O2'	2.06	0.67
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.76	0.67
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.28	0.67
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.29	0.67
1:AA:315:A:C8	1:AA:330:C:H5'	2.29	0.67
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.24	0.67
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.25	0.67
22:DA:1050:A:C2	22:DA:2751:G:C4	2.83	0.67
32:DK:34:GLY:O	32:DK:36:GLY:N	2.27	0.67
1:AA:451:A:C8	1:AA:452:A:C2	2.83	0.67
1:AA:620:C:H1'	4:AD:132:ILE:HD11	1.75	0.67
22:BA:276:U:H2'	22:BA:276:U:O2	1.95	0.67
50:B2:43:THR:O	50:B2:44:VAL:HB	1.94	0.67
1:CA:992:U:C5	1:CA:1043:G:C8	2.83	0.67
22:DA:1855:U:C5	22:DA:1856:U:C5	2.83	0.67
22:BA:1776:G:OP2	57:BA:3449:HOH:O	2.12	0.67
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.67
35:BN:66:ALA:O	35:BN:69:ARG:O	2.13	0.67
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.28	0.67
22:DA:631:A:N3	22:DA:2415:G:O2'	2.24	0.67
1:AA:201:G:C2	1:AA:217:C:O2	2.48	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1014:A:H2'	1:AA:1015:G:O4'	1.95	0.67
1:AA:1149:C:OP2	9:AI:11:ARG:NH2	2.28	0.67
1:AA:1152:A:OP1	10:AJ:70:HIS:ND1	2.28	0.67
22:BA:560:C:OP2	57:BA:3250:HOH:O	2.13	0.67
27:BF:132:VAL:HG22	27:BF:152:LEU:HB2	1.77	0.67
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.76	0.67
1:CA:1361:G:H3'	1:CA:1362:A:H5"	1.76	0.67
22:DA:82:U:N3	22:DA:83:A:N7	2.43	0.67
22:DA:996:A:C2	22:DA:997:G:C8	2.83	0.67
22:DA:1652:A:C2	22:DA:2006:C:N3	2.63	0.67
37:DP:113:ARG:O	37:DP:114:LEU:C	2.38	0.67
2:AB:50:PHE:HA	2:AB:213:TYR:OH	1.94	0.66
22:BA:395:U:O2'	22:BA:396:G:N7	2.28	0.66
22:BA:1395:A:OP1	57:BA:3413:HOH:O	2.11	0.66
25:BD:105:LYS:O	25:BD:177:VAL:HG13	1.95	0.66
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.09	0.66
47:BZ:36:VAL:HG21	47:BZ:38:ARG:NH2	2.09	0.66
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.09	0.66
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.77	0.66
22:DA:1651:G:C2	22:DA:2007:U:O2	2.49	0.66
14:AN:51:LEU:O	14:AN:53:ARG:N	2.29	0.66
22:BA:528:A:H3'	22:BA:528:A:H8	1.59	0.66
22:BA:653:U:OP2	22:BA:653:U:C6	2.48	0.66
25:BD:103:ASP:OD1	25:BD:104:VAL:N	2.28	0.66
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.95	0.66
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.31	0.66
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.26	0.66
22:DA:297:G:H5"	42:DU:85:PHE:HB2	1.77	0.66
22:DA:2199:A:C4'	29:DH:28:ASN:ND2	2.59	0.66
50:D2:35:ARG:O	50:D2:38:GLY:N	2.27	0.66
22:BA:528:A:C8	22:BA:528:A:C3'	2.78	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
41:BT:18:GLU:O	41:BT:22:THR:HG23	1.95	0.66
22:DA:671:C:O2'	22:DA:672:C:O5'	2.09	0.66
22:DA:1351:C:H2'	22:DA:1352:U:O4'	1.95	0.66
22:DA:2133:G:N2	22:DA:2158:A:C6	2.64	0.66
7:AG:15:ASP:OD1	7:AG:44:TYR:OH	2.14	0.66
10:AJ:54:SER:O	14:AN:81:ARG:NH2	2.28	0.66
11:AK:52:PHE:HB3	11:AK:56:ARG:HB3	1.77	0.66
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.93	0.66
22:BA:1073:A:H3'	22:BA:1074:G:H5"	1.74	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1265:A:OP1	57:BA:3753:HOH:O	2.12	0.66
1:CA:378:G:C2	1:CA:386:C:O2	2.49	0.66
2:CB:21:ARG:HA	2:CB:21:ARG:CZ	2.25	0.66
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.94	0.66
22:BA:1057:A:C2	22:BA:1086:A:C2	2.83	0.66
22:BA:1605:C:C2'	22:BA:1606:C:H5'	2.26	0.66
33:BL:35:HIS:O	33:BL:36:LYS:HB2	1.95	0.66
1:CA:475:C:H2'	1:CA:476:U:C6	2.30	0.66
1:CA:805:C:C2	1:CA:806:C:C5	2.84	0.66
5:CE:101:GLU:O	5:CE:103:THR:N	2.29	0.66
5:CE:105:ILE:HG23	5:CE:105:ILE:O	1.94	0.66
22:DA:450:G:N1	22:DA:454:A:OP2	2.26	0.66
1:AA:1313:U:P	19:AS:6:LYS:HB3	2.35	0.66
1:AA:1353:G:C2	1:AA:1354:U:C5	2.84	0.66
8:AH:51:VAL:O	8:AH:51:VAL:HG22	1.94	0.66
1:CA:572:A:H5'	1:CA:573:A:OP2	1.96	0.66
1:CA:666:G:C6	1:CA:741:G:C6	2.84	0.66
1:CA:1048:G:OP2	57:CA:1849:HOH:O	2.14	0.66
1:CA:1151:A:C2	1:CA:1152:A:C5	2.84	0.66
1:CA:1298:U:O2	1:CA:1298:U:H2'	1.94	0.66
2:CB:35:ARG:O	2:CB:38:VAL:HG12	1.96	0.66
4:CD:31:LYS:N	4:CD:31:LYS:HD3	2.10	0.66
14:CN:21:PHE:O	14:CN:23:LYS:N	2.28	0.66
22:DA:1973:G:C6	22:DA:1974:C:C4	2.83	0.66
22:BA:319:G:C4	22:BA:333:G:N2	2.63	0.66
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.11	0.66
9:CI:95:ARG:O	9:CI:99:ARG:N	2.29	0.66
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	1.95	0.66
23:DB:14:U:H2'	23:DB:14:U:O2	1.95	0.66
22:BA:48:G:N2	22:BA:49:A:N1	2.42	0.66
22:BA:159:G:O2'	22:BA:167:A:N6	2.28	0.66
22:BA:1917:U:C4	22:BA:1918:A:C5	2.84	0.66
26:BE:119:ILE:HB	26:BE:187:VAL:HG23	1.78	0.66
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.10	0.66
34:BM:47:GLU:OE2	34:BM:51:ARG:NE	2.29	0.66
49:B1:23:THR:OG1	49:B1:24:THR:N	2.26	0.66
2:CB:119:THR:O	2:CB:120:GLN:CB	2.43	0.66
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.13	0.66
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.31	0.66
50:D2:18:PHE:O	50:D2:19:ARG:C	2.39	0.66
4:AD:123:ILE:HD13	4:AD:123:ILE:N	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:44:LYS:NZ	20:AT:86:LEU:O	2.28	0.66
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.78	0.66
22:BA:1428:C:C5	22:BA:1569:A:H5"	2.30	0.66
33:BL:85:VAL:HG11	33:BL:94:THR:HG22	1.78	0.66
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.29	0.66
1:AA:269:C:H2'	1:AA:270:A:C8	2.31	0.66
21:AU:35:ARG:O	21:AU:36:GLU:C	2.39	0.66
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.26	0.66
49:B1:17:THR:HG21	49:B1:42:VAL:HB	1.78	0.66
5:CE:131:THR:O	5:CE:132:ASN:C	2.39	0.66
6:CF:19:PRO:HA	6:CF:22:ILE:HB	1.78	0.66
22:DA:39:G:C6	22:DA:40:U:C4	2.84	0.66
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.31	0.66
1:AA:1311:A:C2	1:AA:1327:C:N3	2.64	0.65
22:BA:1132:U:H3'	22:BA:1133:A:H5"	1.79	0.65
24:BC:182:ARG:HH21	24:BC:182:ARG:CG	2.09	0.65
1:CA:259:G:OP2	57:CA:1727:HOH:O	2.12	0.65
22:DA:2093:G:C6	22:DA:2225:A:C8	2.85	0.65
22:DA:2692:G:O4'	22:DA:2846:G:N2	2.29	0.65
35:DN:69:ARG:O	35:DN:71:ARG:N	2.26	0.65
1:AA:914:A:C4	1:AA:915:A:C8	2.84	0.65
2:AB:160:ALA:O	2:AB:161:LEU:HB2	1.97	0.65
20:AT:68:HIS:HB3	20:AT:69:LYS:HE3	1.77	0.65
22:DA:613:A:OP2	22:DA:614:A:N7	2.29	0.65
1:AA:21:G:N2	1:AA:22:G:C6	2.64	0.65
7:AG:99:LEU:O	7:AG:102:ARG:N	2.30	0.65
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.12	0.65
22:BA:1417:C:H2'	22:BA:1418:G:O4'	1.96	0.65
22:BA:1426:G:H1'	22:BA:1573:G:O6	1.96	0.65
24:BC:125:LYS:HG2	24:BC:128:ASN:ND2	2.11	0.65
24:BC:225:MET:HE2	24:BC:230:HIS:HB2	1.77	0.65
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.65
1:CA:1089:G:C5	1:CA:1090:U:C5	2.84	0.65
22:DA:563:A:C4	22:DA:2018:G:C2	2.84	0.65
23:DB:81:G:C5	23:DB:82:U:C5	2.84	0.65
45:DX:31:PRO:O	45:DX:33:LEU:N	2.29	0.65
1:AA:824:G:H1'	8:AH:2:SER:N	2.12	0.65
1:AA:1006:G:OP1	1:AA:1037:C:O2'	2.14	0.65
8:AH:42:GLU:OE1	8:AH:42:GLU:N	2.30	0.65
22:BA:819:A:C4	22:BA:1189:A:C2	2.84	0.65
27:BF:25:VAL:O	27:BF:28:VAL:HG12	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:85:LEU:HG	2:CB:85:LEU:O	1.94	0.65
24:DC:70:ASN:O	24:DC:72:ASP:N	2.29	0.65
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.44	0.65
1:AA:208:U:C5	1:AA:210:C:C4	2.84	0.65
14:AN:91:GLY:O	14:AN:93:ILE:N	2.27	0.65
27:BF:14:LYS:O	27:BF:18:THR:CG2	2.44	0.65
46:BY:18:LEU:O	46:BY:22:LEU:HB2	1.96	0.65
1:CA:64:G:C8	1:CA:99:C:N4	2.64	0.65
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.26	0.65
22:DA:777:G:C2	22:DA:778:G:C8	2.84	0.65
22:DA:783:A:O2'	22:DA:1779:U:O2	2.09	0.65
22:DA:1715:G:O2'	22:DA:1743:G:O6	2.11	0.65
1:AA:928:G:O2'	1:AA:1533:C:OP1	2.13	0.65
9:AI:90:TYR:O	9:AI:91:ASP:CG	2.40	0.65
22:BA:580:U:H2'	22:BA:581:C:C6	2.30	0.65
22:BA:2307:G:N3	22:BA:2308:G:O6	2.30	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
1:CA:536:C:OP1	57:CA:1769:HOH:O	2.15	0.65
1:CA:1162:C:C2	1:CA:1175:G:N2	2.65	0.65
22:DA:447:A:OP2	57:DA:3210:HOH:O	2.15	0.65
22:DA:1253:A:OP1	38:DQ:33:ARG:NH1	2.29	0.65
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE1	2.31	0.65
14:AN:83:LYS:NZ	14:AN:86:GLU:OE1	2.24	0.65
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.79	0.65
44:BW:10:THR:O	44:BW:11:ARG:HB2	1.97	0.65
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.96	0.65
1:CA:73:C:O2'	1:CA:74:A:O5'	2.14	0.65
2:CB:82:ASP:OD1	2:CB:82:ASP:N	2.28	0.65
4:CD:202:GLU:OE1	5:CE:105:ILE:CG2	2.44	0.65
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.78	0.65
22:DA:1317:G:C2	22:DA:1336:A:C2	2.84	0.65
22:DA:1604:C:OP1	57:DA:3403:HOH:O	2.14	0.65
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.32	0.65
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.12	0.65
39:BR:46:GLU:N	39:BR:46:GLU:OE1	2.30	0.65
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.21	0.65
42:BU:39:ILE:HG22	42:BU:40:ASN:H	1.61	0.65
8:CH:125:ILE:HD11	8:CH:128:TYR:CE1	2.31	0.65
22:DA:2612:C:H5"	22:DA:2613:U:OP1	1.97	0.65
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:104:G:C2	1:AA:105:G:C8	2.84	0.65
1:AA:983:A:C2'	1:AA:983:A:N3	2.59	0.65
22:BA:2211:A:O2'	22:BA:2212:A:OP1	2.13	0.65
24:BC:227:PRO:HA	24:BC:233:GLY:HA2	1.77	0.65
1:CA:604:G:H2'	1:CA:605:U:O4'	1.97	0.65
22:DA:142:A:C6	22:DA:143:C:N4	2.65	0.65
22:DA:1289:C:O2'	22:DA:1330:C:H4'	1.97	0.65
22:DA:1779:U:H5	22:DA:1784:A:N7	1.94	0.65
26:DE:98:LYS:NZ	57:DE:306:HOH:O	2.29	0.65
1:AA:483:C:O2	16:AP:13:LYS:NZ	2.29	0.65
1:AA:988:G:C6	1:AA:989:U:C4	2.85	0.65
2:AB:33:GLY:O	2:AB:34:ALA:CB	2.45	0.65
9:AI:36:GLU:OE2	9:AI:36:GLU:N	2.30	0.65
12:AL:25:GLU:O	12:AL:26:ALA:C	2.40	0.65
22:BA:1509:A:O2'	22:BA:1510:G:P	2.55	0.65
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.36	0.65
5:CE:94:VAL:HG13	5:CE:111:MET:HE1	1.78	0.65
25:DD:112:THR:O	25:DD:195:GLY:HA2	1.96	0.65
1:AA:328:C:O2	1:AA:328:C:H2'	1.97	0.64
1:AA:411:A:C5	1:AA:429:U:C5	2.86	0.64
1:AA:872:A:C5	1:AA:874:G:C8	2.84	0.64
1:AA:1353:G:C2	1:AA:1354:U:C6	2.85	0.64
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.31	0.64
22:BA:1340:U:H4'	22:BA:1341:G:OP2	1.96	0.64
22:BA:2189:U:H2'	22:BA:2190:G:H1'	1.78	0.64
22:DA:398:C:OP1	45:DX:32:ASN:ND2	2.30	0.64
1:AA:859:G:H2'	1:AA:860:A:C8	2.32	0.64
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.78	0.64
24:BC:136:PRO:O	24:BC:139:SER:OG	2.15	0.64
8:CH:55:THR:C	8:CH:57:PRO:HD3	2.23	0.64
12:CL:86:ARG:CZ	12:CL:88:LYS:HB3	2.27	0.64
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.30	0.64
1:AA:982:U:H4'	1:AA:983:A:H5'	1.77	0.64
1:AA:1410:A:C4	1:AA:1491:G:N2	2.66	0.64
22:BA:1917:U:O4	22:BA:1918:A:C2	2.50	0.64
1:CA:898:G:O2'	1:CA:900:A:N7	2.20	0.64
12:CL:116:LYS:O	12:CL:117:TYR:CD2	2.50	0.64
22:DA:13:A:N1	22:DA:525:U:H2'	2.11	0.64
22:DA:160:A:N3	22:DA:2208:C:O2'	2.30	0.64
22:DA:1525:A:C2	22:DA:1526:C:C2	2.84	0.64
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2407:A:OP1	57:DA:3560:HOH:O	2.15	0.64
1:AA:705:G:C5	1:AA:706:A:C8	2.85	0.64
22:BA:1090:A:H2'	22:BA:1091:G:H5'	1.78	0.64
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.80	0.64
7:CG:88:PRO:HD2	7:CG:151:PHE:O	1.97	0.64
22:DA:82:U:C2	22:DA:83:A:C8	2.85	0.64
22:DA:948:C:O2	22:DA:984:A:O2'	2.14	0.64
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.12	0.64
1:AA:507:C:C4	1:AA:508:U:C4	2.86	0.64
1:AA:1493:A:O2'	1:AA:1494:G:OP2	2.16	0.64
22:BA:142:A:C5	22:BA:143:C:C4	2.85	0.64
22:BA:2377:A:C2'	22:BA:2378:A:H5'	2.28	0.64
2:CB:141:LEU:O	2:CB:144:LEU:N	2.30	0.64
39:DR:101:ILE:O	39:DR:103:ALA:N	2.30	0.64
2:AB:82:ASP:O	2:AB:84:ALA:N	2.30	0.64
50:B2:43:THR:O	50:B2:44:VAL:HG12	1.98	0.64
1:CA:689:C:OP2	11:CK:53:ARG:NH2	2.29	0.64
4:CD:35:GLU:HG3	4:CD:36:GLN:HG3	1.79	0.64
22:DA:352:A:H2'	22:DA:353:C:O4'	1.97	0.64
28:DG:116:GLN:NE2	28:DG:117:LEU:O	2.31	0.64
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.46	0.64
22:BA:2707:U:O2	35:BN:71:ARG:NH1	2.30	0.64
25:BD:16:THR:OG1	25:BD:18:ASP:OD1	2.11	0.64
35:BN:58:ASP:OD2	35:BN:63:ARG:NH2	2.31	0.64
46:BY:11:VAL:O	46:BY:15:ASN:ND2	2.30	0.64
1:CA:373:A:C2	1:CA:374:A:C8	2.86	0.64
12:CL:38:TYR:HB2	12:CL:52:VAL:HG13	1.80	0.64
22:DA:781:A:H2'	22:DA:1777:U:O2'	1.98	0.64
22:DA:1060:U:O4'	22:DA:1062:G:H5'	1.98	0.64
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	1.98	0.64
33:DL:77:ILE:O	33:DL:110:VAL:O	2.16	0.64
1:AA:1129:C:O2	1:AA:1130:A:N6	2.31	0.64
9:AI:43:THR:O	9:AI:44:ALA:CB	2.46	0.64
21:AU:14:VAL:HG13	21:AU:16:LEU:HG	1.78	0.64
22:BA:832:U:H2'	22:BA:833:A:C8	2.33	0.64
22:BA:1914:C:C2	22:BA:1915:U:C6	2.86	0.64
1:CA:72:A:N6	1:CA:73:C:N4	2.46	0.64
1:CA:811:C:N4	1:CA:812:G:C6	2.66	0.64
1:CA:1005:A:O3'	1:CA:1037:C:O2'	2.16	0.64
15:CO:35:GLN:NE2	15:CO:39:LEU:HD22	2.12	0.64
22:DA:1754:A:N6	22:DA:1755:A:C6	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:140:HIS:CE1	57:DD:303:HOH:O	2.50	0.64
1:AA:832:G:C2	1:AA:833:G:C8	2.86	0.64
8:AH:2:SER:O	8:AH:4:GLN:N	2.31	0.64
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.13	0.64
22:BA:2191:A:C6	22:BA:2192:U:O4	2.51	0.64
5:CE:101:GLU:O	5:CE:101:GLU:CD	2.41	0.64
5:CE:136:VAL:O	5:CE:140:THR:OG1	2.15	0.64
22:DA:201:C:C4	22:DA:202:U:C5	2.86	0.64
22:DA:370:G:O2'	22:DA:424:G:OP1	2.14	0.64
22:DA:747:U:O2	22:DA:2014:A:H1'	1.98	0.64
6:AF:76:THR:O	6:AF:79:ARG:N	2.31	0.64
12:AL:76:GLU:O	12:AL:77:HIS:HB2	1.97	0.64
19:AS:64:ASP:O	19:AS:65:GLU:HB3	1.98	0.64
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.78	0.64
22:BA:1932:A:H5"	22:BA:1933:G:OP2	1.97	0.64
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.80	0.64
30:BI:113:LYS:HD3	30:BI:117:MET:HG2	1.80	0.64
30:BI:125:MET:O	30:BI:128:SER:OG	2.15	0.64
1:CA:72:A:C6	1:CA:73:C:C4	2.86	0.64
7:CG:92:ARG:NE	7:CG:93:PRO:HD2	2.13	0.64
22:DA:1603:A:OP1	57:DA:3406:HOH:O	2.15	0.64
1:AA:572:A:H5'	1:AA:573:A:OP2	1.97	0.63
1:AA:858:G:OP2	57:AA:1821:HOH:O	2.15	0.63
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	1.98	0.63
22:BA:278:A:C2	22:BA:362:A:C8	2.86	0.63
22:BA:1180:U:O2'	22:BA:1181:U:P	2.56	0.63
22:BA:1776:G:P	57:BA:3451:HOH:O	2.56	0.63
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.29	0.63
1:CA:115:G:C2	1:CA:289:G:N7	2.66	0.63
1:CA:1361:G:H3'	1:CA:1362:A:C5'	2.27	0.63
6:CF:88:MET:HE3	18:CR:64:TYR:CE2	2.33	0.63
22:DA:2202:U:O2'	22:DA:2204:G:OP1	2.12	0.63
22:DA:2868:A:C2	22:DA:2869:G:C4	2.86	0.63
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.63
1:AA:663:A:N1	1:AA:743:A:C2	2.66	0.63
4:AD:143:VAL:O	4:AD:143:VAL:CG2	2.46	0.63
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.46	0.63
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.32	0.63
1:CA:686:U:O2'	1:CA:687:A:OP2	2.13	0.63
1:CA:899:C:O2'	22:DA:1832:C:OP1	2.11	0.63
1:CA:960:U:C5	1:CA:1225:A:C8	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:846:U:HO2'	22:DA:847:U:P	2.21	0.63
22:DA:1440:U:O4	57:DA:3628:HOH:O	2.13	0.63
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.98	0.63
20:AT:5:LYS:O	20:AT:7:ALA:N	2.31	0.63
22:BA:2190:G:C6	22:BA:2191:A:C6	2.87	0.63
24:BC:230:HIS:CD2	24:BC:247:PRO:HA	2.34	0.63
1:CA:791:G:C6	1:CA:792:A:N7	2.67	0.63
22:DA:1045:C:O2	22:DA:1047:G:N1	2.31	0.63
22:DA:1438:U:C5	22:DA:1552:A:C2	2.86	0.63
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.12	0.63
16:AP:39:PHE:CD2	16:AP:74:LEU:HD11	2.34	0.63
22:BA:947:A:O2'	22:BA:984:A:C2	2.50	0.63
22:BA:1083:U:O2	22:BA:1086:A:N1	2.31	0.63
1:CA:106:C:O2	1:CA:379:C:H4'	1.99	0.63
4:CD:145:ILE:CG2	4:CD:150:LYS:HA	2.29	0.63
22:DA:511:U:O3'	22:DA:1215:G:N2	2.31	0.63
22:DA:537:G:N1	22:DA:555:G:C2	2.67	0.63
22:DA:1469:A:C2	22:DA:1470:A:C5	2.85	0.63
22:DA:2454:G:H1'	57:DA:3529:HOH:O	1.97	0.63
22:DA:2550:G:O6	22:DA:2551:C:N4	2.32	0.63
32:DK:118:LEU:O	32:DK:119:ALA:HB3	1.97	0.63
42:DU:11:VAL:HG12	42:DU:72:ILE:HA	1.80	0.63
6:AF:3:HIS:O	6:AF:92:THR:OG1	2.16	0.63
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.29	0.63
22:BA:2191:A:C2	22:BA:2192:U:N3	2.67	0.63
22:BA:2808:G:N2	22:BA:2891:U:C6	2.66	0.63
30:BI:28:LEU:HD12	30:BI:28:LEU:O	1.99	0.63
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.39	0.63
46:BY:56:LEU:O	46:BY:57:LEU:HB2	1.97	0.63
5:CE:94:VAL:CG1	5:CE:111:MET:HE1	2.27	0.63
22:DA:846:U:O2'	22:DA:847:U:O5'	2.15	0.63
22:DA:1509:A:O2'	22:DA:1510:G:P	2.57	0.63
22:DA:1793:C:N4	57:DA:3780:HOH:O	2.31	0.63
22:DA:2143:C:H2'	22:DA:2144:G:O4'	1.97	0.63
24:DC:117:GLN:N	24:DC:128:ASN:OD1	2.31	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
1:AA:157:U:O2'	1:AA:158:G:H5'	1.98	0.63
1:AA:1000:A:C2	1:AA:1041:G:C2	2.86	0.63
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.99	0.63
1:CA:451:A:C8	1:CA:452:A:C6	2.86	0.63
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:4:TYR:O	4:CD:5:LEU:HB2	1.99	0.63
6:CF:18:VAL:HA	6:CF:21:MET:HE2	1.80	0.63
15:CO:87:LEU:O	15:CO:88:ARG:HB3	1.98	0.63
19:CS:10:PHE:O	19:CS:39:THR:OG1	2.17	0.63
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.34	0.63
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	1.80	0.63
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.28	0.63
22:BA:1020:A:C2	22:BA:1141:U:C2	2.87	0.63
25:BD:103:ASP:O	25:BD:105:LYS:N	2.31	0.63
40:BS:25:ARG:NH2	40:BS:74:ILE:O	2.31	0.63
1:CA:31:G:O4'	1:CA:306:A:C2	2.52	0.63
1:CA:860:A:N6	1:CA:861:G:C2	2.67	0.63
1:CA:1147:C:O2	9:CI:18:ARG:NH2	2.31	0.63
1:CA:1308:U:OP1	13:CM:97:VAL:N	2.32	0.63
2:CB:73:LYS:NZ	2:CB:204:ASP:O	2.28	0.63
22:DA:47:C:HO2'	22:DA:52:A:HO2'	1.43	0.63
22:DA:776:G:C8	22:DA:793:A:C4	2.87	0.63
22:DA:983:A:N6	22:DA:984:A:C2	2.67	0.63
1:AA:429:U:H1'	1:AA:430:A:H5"	1.81	0.63
22:BA:1317:G:C2	22:BA:1336:A:C2	2.86	0.63
22:BA:2646:C:OP2	22:BA:2732:G:O2'	2.17	0.63
1:CA:463:U:H5'	1:CA:464:U:OP2	1.99	0.63
17:CQ:14:SER:C	17:CQ:17:MET:HE1	2.24	0.63
22:DA:89:A:C2	22:DA:90:U:C2	2.87	0.63
22:DA:2586:U:C5	22:DA:2608:G:N2	2.67	0.63
1:AA:724:G:C2	1:AA:725:G:C8	2.87	0.63
4:AD:58:LYS:NZ	4:AD:69:GLU:OE2	2.32	0.63
12:AL:110:ARG:NH1	12:AL:112:GLN:O	2.31	0.63
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.34	0.63
22:BA:1851:U:C4	22:BA:1852:U:C4	2.86	0.63
25:BD:125:TRP:CD2	25:BD:160:LYS:HD3	2.33	0.63
27:BF:14:LYS:O	27:BF:18:THR:HG23	1.98	0.63
27:BF:176:PRO:O	27:BF:177:PHE:HB2	1.98	0.63
39:BR:49:ILE:CB	39:BR:52:PRO:C	2.72	0.63
41:BT:51:PHE:O	41:BT:52:GLU:C	2.42	0.63
1:CA:1080:A:OP1	5:CE:52:LYS:HE2	1.98	0.63
1:CA:1386:G:C2	1:CA:1387:G:C8	2.86	0.63
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.16	0.63
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.33	0.63
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.34	0.63
1:AA:454:G:N2	1:AA:479:U:O2	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1417:G:C6	1:AA:1482:G:C6	2.87	0.62
16:AP:42:ILE:O	16:AP:42:ILE:HG22	1.99	0.62
22:BA:1876:A:C2	22:BA:1877:A:C4	2.87	0.62
1:CA:1408:A:C2	1:CA:1494:G:C4	2.87	0.62
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.14	0.62
22:DA:1225:G:C6	22:DA:1226:A:N6	2.67	0.62
1:AA:71:A:H3'	1:AA:71:A:OP2	1.99	0.62
1:AA:1014:A:N3	19:AS:34:TRP:CZ3	2.67	0.62
3:AC:83:ASP:O	3:AC:86:LYS:HG3	1.99	0.62
12:AL:63:VAL:HG21	12:AL:95:TYR:CE1	2.34	0.62
22:BA:475:C:C4	22:BA:481:G:O6	2.52	0.62
22:BA:1209:U:O2'	22:BA:1237:A:N1	2.30	0.62
22:BA:1528:A:H2'	22:BA:1529:G:O4'	1.99	0.62
22:BA:2548:U:C4	22:BA:2549:G:N7	2.67	0.62
1:CA:790:A:C6	1:CA:791:G:C6	2.87	0.62
1:CA:891:U:C5	1:CA:906:A:C2	2.87	0.62
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.35	0.62
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.80	0.62
13:CM:20:THR:HG22	13:CM:26:GLY:C	2.24	0.62
22:DA:24:G:C5	22:DA:25:U:C5	2.87	0.62
22:DA:1951:U:H2'	22:DA:1953:A:OP2	1.99	0.62
24:DC:17:VAL:HB	24:DC:204:VAL:HG22	1.81	0.62
2:AB:49:MET:O	2:AB:53:ALA:HB2	1.98	0.62
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.57	0.62
19:AS:5:LEU:CD2	19:AS:9:PRO:HA	2.29	0.62
22:BA:948:C:O2	22:BA:984:A:O2'	2.17	0.62
27:BF:73:SER:OG	27:BF:80:ARG:HA	1.99	0.62
35:BN:78:LYS:C	35:BN:79:LEU:O	2.41	0.62
22:DA:306:U:O2	22:DA:312:G:N2	2.32	0.62
22:DA:1350:C:C2	22:DA:1382:G:C2	2.87	0.62
22:DA:1826:G:C5	22:DA:1827:U:C5	2.87	0.62
24:DC:124:ILE:O	24:DC:124:ILE:HG22	1.99	0.62
27:DF:106:ILE:HD11	27:DF:139:PRO:HG2	1.80	0.62
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.52	0.62
1:AA:728:A:C6	1:AA:729:A:C6	2.86	0.62
1:AA:792:A:H4'	1:AA:793:U:O5'	1.98	0.62
13:AM:3:ARG:HA	13:AM:9:ILE:HA	1.81	0.62
22:BA:580:U:H2'	22:BA:581:C:H6	1.65	0.62
22:BA:2554:U:C4	22:BA:2555:U:O4	2.52	0.62
28:BG:124:GLU:OE1	28:BG:125:CYS:N	2.31	0.62
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:49:ARG:NH2	9:CI:52:LEU:O	2.33	0.62
18:CR:72:ASP:C	18:CR:73:ARG:HG2	2.25	0.62
22:DA:1206:G:C5	22:DA:1207:C:C5	2.87	0.62
25:DD:104:VAL:HG23	25:DD:177:VAL:HG11	1.81	0.62
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.68	0.62
1:AA:1304:G:N1	1:AA:1305:G:N2	2.47	0.62
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.23	0.62
4:AD:150:LYS:O	4:AD:152:GLN:NE2	2.32	0.62
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.81	0.62
26:BE:77:ILE:HG22	26:BE:77:ILE:O	2.00	0.62
39:BR:1:MET:HE3	39:BR:101:ILE:HB	1.81	0.62
1:CA:176:C:OP1	20:CT:20:HIS:NE2	2.33	0.62
1:CA:409:U:H2'	1:CA:410:G:O4'	2.00	0.62
1:CA:811:C:O2'	1:CA:901:A:N1	2.31	0.62
1:CA:1521:C:C4	1:CA:1522:U:C5	2.87	0.62
4:CD:174:ASP:O	4:CD:175:ALA:HB2	1.98	0.62
22:DA:307:G:N2	22:DA:310:A:C8	2.67	0.62
22:DA:663:G:O6	22:DA:664:G:C6	2.53	0.62
3:AC:25:ASN:O	3:AC:27:LYS:N	2.32	0.62
6:AF:91:ARG:C	6:AF:92:THR:HG1	2.01	0.62
21:AU:25:LYS:O	21:AU:27:GLY:N	2.32	0.62
27:BF:79:ILE:HG21	27:BF:85:ILE:CD1	2.30	0.62
1:CA:207:C:O2	1:CA:207:C:H2'	2.00	0.62
1:CA:890:G:O2'	1:CA:891:U:OP2	2.17	0.62
3:CC:179:ARG:O	3:CC:206:GLU:O	2.18	0.62
15:CO:56:LEU:O	15:CO:59:MET:N	2.33	0.62
22:DA:830:G:C2	22:DA:2448:A:N7	2.68	0.62
22:DA:1316:U:C2	22:DA:1337:G:N2	2.67	0.62
22:DA:1333:G:C2	22:DA:1334:G:C8	2.87	0.62
22:DA:2502:G:H5'	22:DA:2503:A:H5"	1.81	0.62
22:DA:2752:C:C5	22:DA:2753:A:N7	2.68	0.62
1:AA:131:A:C2	1:AA:132:C:C4	2.87	0.62
4:AD:29:ASP:O	4:AD:31:LYS:HD3	1.99	0.62
4:AD:191:LEU:O	4:AD:192:SER:HB2	1.99	0.62
13:AM:83:LEU:HD21	19:AS:65:GLU:HG2	1.82	0.62
22:BA:1073:A:C3'	22:BA:1074:G:H5"	2.29	0.62
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.83	0.62
26:BE:91:ASP:OD1	26:BE:93:SER:OG	2.17	0.62
40:BS:29:VAL:CG1	40:BS:55:ILE:HD11	2.29	0.62
1:CA:372:C:O2	57:CA:1891:HOH:O	2.11	0.62
1:CA:409:U:OP1	4:CD:24:GLY:HA3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:33:ASP:O	14:CN:35:ASN:N	2.33	0.62
22:DA:1355:G:C6	22:DA:1377:G:N2	2.67	0.62
47:DZ:8:THR:HG1	47:DZ:35:THR:HG1	1.46	0.62
14:AN:52:PRO:O	14:AN:53:ARG:HB3	1.99	0.62
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.48	0.62
22:BA:980:A:C6	22:BA:981:A:N1	2.68	0.62
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	1.82	0.62
5:CE:98:PRO:O	5:CE:99:ALA:HB3	2.00	0.62
19:CS:55:ARG:CZ	19:CS:79:THR:HG22	2.30	0.62
22:DA:305:C:H1'	22:DA:313:G:N2	2.15	0.62
22:DA:740:C:N4	22:DA:758:C:O2	2.32	0.62
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.35	0.62
1:AA:96:U:O2'	1:AA:97:G:P	2.58	0.62
4:AD:98:LEU:O	4:AD:101:VAL:N	2.32	0.62
20:AT:81:ALA:O	20:AT:85:LYS:HG2	1.99	0.62
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.34	0.62
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.81	0.62
48:B0:15:MET:O	48:B0:18:SER:HB3	2.00	0.62
1:CA:263:A:P	20:CT:74:ARG:NH1	2.73	0.62
1:CA:1321:U:O3'	19:CS:78:ARG:NH2	2.33	0.62
9:CI:120:LYS:HG3	9:CI:123:ARG:HB3	1.80	0.62
21:CU:4:ILE:N	21:CU:19:PHE:CE2	2.68	0.62
22:DA:425:G:N2	22:DA:426:C:C2	2.68	0.62
22:DA:1444:G:C2	22:DA:1548:A:C2	2.87	0.62
14:AN:49:GLN:HA	14:AN:49:GLN:OE1	1.98	0.62
22:BA:819:A:OP2	22:BA:1187:G:N2	2.32	0.62
22:BA:1142:A:C4	22:BA:1144:A:C8	2.88	0.62
46:BY:22:LEU:O	46:BY:23:ARG:C	2.43	0.62
1:CA:765:G:C6	1:CA:812:G:C4	2.88	0.62
22:DA:508:A:N6	40:DS:9:HIS:CE1	2.67	0.62
22:DA:590:A:C6	22:DA:591:U:C4	2.88	0.62
22:DA:1094:U:H2'	22:DA:1096:A:OP2	2.00	0.62
22:DA:1335:C:N4	57:DA:3389:HOH:O	2.27	0.62
22:DA:2511:U:C5	22:DA:2512:C:C5	2.88	0.62
23:DB:2:G:N2	23:DB:3:C:C2	2.68	0.62
23:DB:62:C:H2'	23:DB:63:C:C6	2.33	0.62
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.29	0.62
3:AC:130:PHE:CZ	3:AC:131:ARG:HD2	2.34	0.61
5:AE:137:VAL:O	5:AE:138:ARG:HB2	1.99	0.61
9:AI:127:PHE:O	9:AI:127:PHE:CD1	2.52	0.61
22:BA:139:U:HO2'	22:BA:141:G:H1	1.45	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1911:U:H2'	22:BA:1918:A:C2	2.35	0.61
22:BA:2346:A:H4'	22:BA:2347:C:OP2	2.00	0.61
27:BF:105:THR:HG23	27:BF:106:ILE:HG23	1.82	0.61
1:CA:32:A:OP1	1:CA:398:U:H1'	2.00	0.61
1:CA:1124:G:N2	1:CA:1127:G:C2	2.68	0.61
3:CC:42:TYR:CE2	3:CC:90:VAL:HG21	2.35	0.61
7:CG:68:ASN:OD1	7:CG:130:ASN:ND2	2.32	0.61
22:DA:116:C:O2'	22:DA:126:A:O2'	2.03	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
42:DU:7:ARG:O	42:DU:25:VAL:HB	2.00	0.61
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.82	0.61
4:AD:101:VAL:O	4:AD:101:VAL:HG12	1.99	0.61
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.34	0.61
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.35	0.61
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.35	0.61
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.35	0.61
29:BH:123:ARG:C	29:BH:124:THR:CG2	2.65	0.61
1:CA:568:G:O6	12:CL:2:ALA:HB2	2.00	0.61
1:CA:577:G:C2	1:CA:578:C:C6	2.88	0.61
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.16	0.61
8:CH:88:ARG:O	8:CH:122:GLY:HA3	2.01	0.61
22:DA:223:A:C5	22:DA:422:A:C8	2.88	0.61
22:DA:1131:G:OP1	31:DJ:82:GLY:HA2	2.01	0.61
22:DA:1389:G:N2	22:DA:1398:C:N3	2.49	0.61
22:DA:2094:A:H5'	29:DH:25:TYR:CB	2.30	0.61
30:DI:97:LYS:N	30:DI:97:LYS:HD2	2.15	0.61
1:AA:532:A:N6	3:AC:192:THR:OG1	2.32	0.61
1:AA:683:G:N2	11:AK:39:GLY:O	2.34	0.61
2:AB:15:HIS:O	2:AB:16:PHE:C	2.42	0.61
22:BA:1916:A:H2'	22:BA:1917:U:C4'	2.30	0.61
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.35	0.61
39:BR:49:ILE:HB	39:BR:52:PRO:O	1.99	0.61
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.49	0.61
4:CD:22:LYS:O	4:CD:23:SER:C	2.43	0.61
4:CD:168:PRO:CB	4:CD:171:LEU:HD12	2.31	0.61
22:DA:59:U:O2'	22:DA:74:A:OP2	2.09	0.61
22:DA:2360:G:H1'	33:DL:60:ARG:HD3	1.82	0.61
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.61
34:DM:19:GLY:O	34:DM:38:ARG:NH1	2.32	0.61
1:AA:1378:C:H2'	1:AA:1379:G:O5'	2.01	0.61
22:BA:528:A:C2'	22:BA:529:A:H5"	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2298:A:C6	22:BA:2321:U:O4	2.53	0.61
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.14	0.61
1:CA:862:C:C4	1:CA:863:U:C5	2.88	0.61
22:DA:192:C:P	57:DA:3738:HOH:O	2.57	0.61
22:DA:1313:U:O2	22:DA:1313:U:H2'	1.99	0.61
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.53	0.61
22:DA:2520:C:HO2'	22:DA:2565:A:HO2'	1.45	0.61
28:DG:166:ASP:N	28:DG:166:ASP:OD1	2.33	0.61
1:AA:1306:A:C4	1:AA:1307:U:C6	2.88	0.61
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.35	0.61
2:AB:75:ALA:O	2:AB:76:ALA:HB2	2.00	0.61
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.15	0.61
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.82	0.61
33:BL:93:ASN:O	33:BL:94:THR:CB	2.48	0.61
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.82	0.61
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.00	0.61
1:CA:268:U:H2'	1:CA:269:C:C6	2.35	0.61
1:CA:949:A:O2'	1:CA:971:G:O6	2.16	0.61
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.16	0.61
1:CA:1359:C:OP2	14:CN:75:ARG:NH1	2.34	0.61
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.15	0.61
22:DA:43:G:N2	22:DA:437:U:C6	2.69	0.61
22:DA:777:G:N7	22:DA:793:A:H2	1.97	0.61
22:DA:1299:G:H5'	22:DA:1301:A:O4'	2.00	0.61
49:D1:10:LYS:O	49:D1:51:GLU:HG2	2.00	0.61
9:AI:52:LEU:HB3	9:AI:57:MET:HG3	1.81	0.61
13:AM:16:VAL:HG22	13:AM:41:GLU:O	2.00	0.61
19:AS:44:MET:HE2	19:AS:49:ILE:CD1	2.31	0.61
22:BA:1695:G:H1'	24:BC:8:PRO:O	1.99	0.61
23:BB:37:C:C5	23:BB:38:C:C4	2.88	0.61
35:BN:75:ILE:O	35:BN:79:LEU:HD12	2.01	0.61
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.01	0.61
1:CA:21:G:H2'	1:CA:22:G:C8	2.36	0.61
1:CA:920:U:H2'	1:CA:921:U:C6	2.35	0.61
19:CS:19:VAL:HG21	19:CS:44:MET:HG2	1.83	0.61
22:DA:1266:G:OP1	48:D0:16:ARG:NE	2.34	0.61
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.15	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
1:AA:1366:C:O2'	10:AJ:62:ARG:NH2	2.33	0.61
22:BA:1176:U:C4	22:BA:1177:G:O6	2.53	0.61
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.31	0.61
4:CD:29:ASP:C	4:CD:31:LYS:H	2.08	0.61
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.83	0.61
4:CD:202:GLU:OE1	5:CE:105:ILE:HG22	2.01	0.61
8:CH:30:SER:OG	8:CH:33:LYS:HG3	2.01	0.61
1:AA:173:U:C6	1:AA:197:A:C2	2.89	0.61
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.48	0.61
4:AD:150:LYS:O	4:AD:151:LYS:C	2.44	0.61
5:AE:108:GLY:O	5:AE:109:GLY:C	2.43	0.61
7:AG:4:ARG:O	7:AG:6:VAL:N	2.33	0.61
7:AG:80:VAL:O	7:AG:82:GLY:N	2.34	0.61
37:BP:106:LYS:O	37:BP:109:ARG:HD3	2.01	0.61
40:BS:37:THR:OG1	40:BS:48:LYS:NZ	2.32	0.61
1:CA:495:A:C2	1:CA:496:A:N6	2.69	0.61
1:CA:1222:G:O6	57:CA:1864:HOH:O	2.14	0.61
19:CS:4:SER:O	19:CS:5:LEU:HB2	1.99	0.61
22:DA:295:G:C2	22:DA:296:U:C5	2.89	0.61
22:DA:586:A:H1'	22:DA:672:C:H1'	1.83	0.61
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.16	0.61
22:DA:1817:G:OP1	24:DC:62:TYR:OH	2.14	0.61
22:DA:2058:A:N6	22:DA:2059:A:N6	2.49	0.61
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.15	0.61
17:AQ:52:GLU:OE1	17:AQ:52:GLU:N	2.33	0.61
22:BA:998:C:C3'	57:BA:3363:HOH:O	2.49	0.61
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.31	0.61
23:BB:54:G:H21	27:BF:26:MET:HE3	1.66	0.61
39:BR:49:ILE:C	39:BR:51:VAL:O	2.44	0.61
1:CA:76:G:N2	1:CA:95:C:C2	2.69	0.61
1:CA:1309:G:C6	1:CA:1329:A:C2	2.88	0.61
2:CB:53:ALA:O	2:CB:57:LEU:HB2	2.00	0.61
5:CE:148:ASN:OD1	8:CH:96:MET:HE1	2.01	0.61
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.83	0.61
17:CQ:47:HIS:HB2	17:CQ:67:LEU:CD1	2.31	0.61
22:DA:749:A:C5	22:DA:750:A:N7	2.68	0.61
22:DA:1515:A:HO2'	22:DA:1556:C:HO2'	1.45	0.61
22:DA:1814:G:C6	22:DA:1815:A:N6	2.69	0.61
1:AA:844:G:C6	1:AA:846:G:O2'	2.54	0.61
1:AA:913:A:OP1	12:AL:88:LYS:NZ	2.34	0.61
1:AA:1054:C:C5	1:AA:1196:A:H2'	2.35	0.61
1:AA:1059:C:N3	1:AA:1060:U:C5	2.69	0.61
22:BA:495:G:H1'	40:BS:57:ASN:ND2	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2297:A:N1	22:BA:2321:U:C5	2.69	0.61
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.49	0.61
22:DA:219:A:N3	22:DA:234:U:O2'	2.32	0.61
22:DA:1262:A:OP1	40:DS:99:ARG:NH2	2.34	0.61
22:DA:2028:U:O4	57:DA:3475:HOH:O	2.14	0.61
22:DA:2118:U:O4	22:DA:2149:U:H1'	2.00	0.61
50:D2:18:PHE:O	50:D2:21:ARG:N	2.34	0.61
1:AA:983:A:N3	1:AA:983:A:H2'	2.15	0.60
2:AB:63:ARG:O	2:AB:64:LYS:HB2	2.00	0.60
22:BA:630:G:H5"	22:BA:631:A:OP2	2.00	0.60
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.82	0.60
36:BO:10:ARG:NH2	36:BO:96:GLY:O	2.34	0.60
38:BQ:110:VAL:O	38:BQ:114:LYS:HG3	2.02	0.60
53:B5:212:SER:CB	53:B5:221:PRO:CB	2.79	0.60
1:CA:577:G:C8	1:CA:816:A:C6	2.89	0.60
1:CA:724:G:OP2	1:CA:833:G:O2'	2.16	0.60
6:CF:86:ARG:CG	6:CF:86:ARG:HH11	2.14	0.60
9:CI:12:ARG:CD	9:CI:107:ASP:HB3	2.31	0.60
22:DA:543:G:C2	22:DA:551:G:C5	2.88	0.60
22:DA:1325:U:OP1	22:DA:1647:U:O2'	2.17	0.60
1:AA:1141:C:O2'	1:AA:1142:G:O5'	2.19	0.60
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.32	0.60
20:AT:70:ASN:N	20:AT:70:ASN:OD1	2.32	0.60
22:BA:999:U:C5	22:BA:1154:G:C5	2.88	0.60
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.16	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
43:BV:6:ALA:HB1	43:BV:40:ILE:HG23	1.81	0.60
2:CB:15:HIS:C	2:CB:15:HIS:ND1	2.58	0.60
22:DA:684:G:OP1	50:D2:16:HIS:CE1	2.54	0.60
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.36	0.60
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.36	0.60
22:DA:2345:G:C4	22:DA:2381:A:C2	2.90	0.60
22:BA:1277:G:C5'	35:BN:20:MET:HE2	2.32	0.60
23:BB:43:C:O2	27:BF:92:ARG:NH2	2.34	0.60
27:BF:108:VAL:CG1	27:BF:114:PHE:CZ	2.84	0.60
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.60
30:BI:127:ARG:HA	30:BI:130:GLU:HG3	1.82	0.60
1:CA:280:C:N3	17:CQ:41:THR:OG1	2.34	0.60
1:CA:957:U:O3'	19:CS:79:THR:OG1	2.19	0.60
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.36	0.60
4:CD:19:LEU:HD22	4:CD:64:ILE:HG13	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:98:PRO:O	5:CE:99:ALA:CB	2.49	0.60
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.16	0.60
22:DA:1359:A:C8	22:DA:1373:A:C2	2.89	0.60
24:DC:9:THR:O	24:DC:10:SER:CB	2.49	0.60
3:AC:144:LEU:HD13	3:AC:144:LEU:N	2.16	0.60
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.02	0.60
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.34	0.60
13:AM:3:ARG:CG	13:AM:4:ILE:N	2.64	0.60
22:BA:1915:U:H2'	22:BA:1916:A:C8	2.35	0.60
24:BC:40:SER:C	24:BC:42:GLY:H	2.08	0.60
25:BD:39:ASP:CG	25:BD:40:LEU:N	2.60	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
4:CD:174:ASP:OD2	4:CD:175:ALA:N	2.34	0.60
7:CG:37:SER:O	7:CG:41:SER:OG	2.14	0.60
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.35	0.60
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.36	0.60
23:DB:43:C:O2	27:DF:92:ARG:NH2	2.34	0.60
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.60
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.82	0.60
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.70	0.60
11:AK:76:GLU:O	11:AK:77:TYR:CD1	2.55	0.60
22:BA:287:G:C2	22:BA:354:A:C2	2.90	0.60
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.55	0.60
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.16	0.60
22:BA:2051:A:H8	22:BA:2051:A:OP2	1.83	0.60
22:BA:2503:A:N3	22:BA:2503:A:H5'	2.16	0.60
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
53:B5:204:GLY:O	53:B5:205:ALA:CB	2.48	0.60
1:CA:404:G:N7	4:CD:2:ALA:HB3	2.16	0.60
1:CA:1255:G:C6	1:CA:1279:G:C8	2.90	0.60
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.17	0.60
22:DA:526:A:P	57:DA:3246:HOH:O	2.59	0.60
22:DA:2361:G:C5	22:DA:2362:C:C5	2.90	0.60
32:DK:64:ARG:HD3	32:DK:102:PRO:O	2.02	0.60
1:AA:381:C:H2'	1:AA:382:A:O4'	2.01	0.60
22:BA:265:A:H4'	22:BA:266:G:OP1	2.01	0.60
22:BA:1417:C:HO2'	22:BA:1587:G:HO2'	1.50	0.60
22:BA:1731:G:C6	22:BA:1733:G:C5	2.89	0.60
22:BA:1922:G:N2	22:BA:1923:U:C1'	2.65	0.60
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.37	0.60
1:CA:66:A:C6	1:CA:67:C:C5	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.37	0.60
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.36	0.60
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.00	0.60
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.49	0.60
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.84	0.60
22:DA:295:G:H2'	22:DA:295:G:N3	2.15	0.60
22:DA:931:U:OP1	47:DZ:30:ARG:NH1	2.34	0.60
39:DR:81:LYS:O	39:DR:82:HIS:C	2.44	0.60
10:AJ:33:GLY:O	10:AJ:34:ALA:HB3	2.00	0.60
17:AQ:69:LYS:O	17:AQ:70:THR:HB	2.01	0.60
22:BA:63:A:C2	22:BA:64:A:C5	2.90	0.60
22:BA:1416:G:HO2'	22:BA:1417:C:H6	1.50	0.60
22:BA:2110:G:N2	22:BA:2180:U:C2	2.70	0.60
24:BC:239:ASN:ND2	57:BC:304:HOH:O	2.34	0.60
31:BJ:17:VAL:CG2	31:BJ:137:PRO:HB2	2.31	0.60
33:BL:30:THR:O	33:BL:33:ARG:HG2	2.02	0.60
1:CA:1004:A:C6	1:CA:1005:A:C6	2.90	0.60
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.67	0.60
1:CA:1108:G:O6	57:CA:1857:HOH:O	2.16	0.60
5:CE:83:HIS:CD2	8:CH:96:MET:CE	2.85	0.60
6:CF:81:ASN:OD1	6:CF:81:ASN:C	2.44	0.60
12:CL:93:VAL:HG23	12:CL:93:VAL:O	2.01	0.60
22:DA:630:G:H5"	22:DA:631:A:OP2	2.01	0.60
22:DA:834:G:H1'	22:DA:2358:A:N3	2.17	0.60
22:DA:1179:G:C6	22:DA:1180:U:H1'	2.36	0.60
22:DA:2550:G:C6	22:DA:2551:C:N4	2.69	0.60
41:DT:12:ARG:O	41:DT:13:ALA:HB2	2.02	0.60
1:AA:16:A:O2'	1:AA:17:U:H5'	2.01	0.60
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.32	0.60
1:AA:1462:C:C2	1:AA:1463:U:C6	2.90	0.60
3:AC:7:PRO:HG2	3:AC:184:TYR:CD2	2.36	0.60
11:AK:125:LYS:CG	11:AK:126:LYS:N	2.63	0.60
22:BA:1907:G:C6	22:BA:1908:C:C4	2.90	0.60
22:BA:1918:A:O2'	22:BA:1920:C:C4	2.54	0.60
22:BA:2615:U:C2	48:B0:4:GLN:HA	2.36	0.60
29:BH:86:ASP:H	1:CA:359:G:H4'	1.66	0.60
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	1.83	0.60
17:CQ:14:SER:OG	17:CQ:22:VAL:HG12	2.02	0.60
20:CT:69:LYS:HB2	20:CT:70:ASN:OD1	2.02	0.60
22:DA:137:U:H2'	22:DA:140:C:C2	2.37	0.60
22:DA:2264:C:C2	22:DA:2277:G:N2	2.70	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.37	0.60
22:DA:2415:G:C5	22:DA:2416:C:C4	2.90	0.60
24:DC:121:ASP:OD1	24:DC:121:ASP:N	2.33	0.60
26:DE:150:THR:OG1	26:DE:151:GLY:N	2.34	0.60
49:D1:51:GLU:HG3	49:D1:52:ALA:N	2.16	0.60
1:AA:89:U:O2'	1:AA:90:C:C5'	2.50	0.60
1:AA:1504:G:O3'	57:AA:1868:HOH:O	2.16	0.60
4:AD:122:ALA:O	4:AD:123:ILE:HG23	2.02	0.60
4:AD:174:ASP:O	4:AD:175:ALA:HB2	2.02	0.60
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.65	0.60
45:BX:2:SER:O	45:BX:4:VAL:N	2.34	0.60
1:CA:558:G:P	57:CA:1729:HOH:O	2.59	0.60
1:CA:955:U:H2'	1:CA:956:U:O4'	2.02	0.60
1:CA:1022:A:C5	1:CA:1023:U:C4	2.90	0.60
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.37	0.60
2:CB:210:VAL:CG2	2:CB:211:THR:N	2.65	0.60
11:CK:101:ASN:C	11:CK:101:ASN:OD1	2.45	0.60
22:DA:46:G:C2	22:DA:47:C:C6	2.89	0.60
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.34	0.60
22:DA:684:G:C2	22:DA:794:A:C2	2.90	0.60
22:DA:982:C:H4'	22:DA:983:A:OP1	2.02	0.60
22:DA:2056:G:C2	22:DA:2057:G:C8	2.90	0.60
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.37	0.60
22:DA:2341:G:C5	22:DA:2342:C:C4	2.90	0.60
35:DN:12:ARG:CZ	35:DN:20:MET:CE	2.80	0.60
40:DS:41:LYS:O	40:DS:42:LYS:C	2.43	0.60
41:DT:61:LEU:HD12	41:DT:62:VAL:N	2.17	0.60
45:DX:5:CYS:SG	45:DX:52:SER:HB3	2.41	0.60
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.34	0.60
1:AA:47:C:O2	1:AA:49:U:C5	2.55	0.60
1:AA:205:A:OP1	1:AA:205:A:H4'	2.01	0.60
1:AA:207:C:O2	1:AA:213:G:N2	2.34	0.60
1:AA:283:U:C5	1:AA:284:C:C5	2.90	0.60
1:AA:736:C:H2'	1:AA:737:C:C6	2.36	0.60
1:AA:831:A:C2	1:AA:832:G:C8	2.90	0.60
2:AB:106:THR:O	2:AB:107:VAL:HB	2.02	0.60
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.49	0.60
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.17	0.60
22:BA:1435:G:O2'	22:BA:1436:G:H5'	2.01	0.60
22:BA:2061:G:C6	55:BA:3001:VIR:H19	2.37	0.60
31:BJ:74:TYR:CD1	31:BJ:92:MET:HG3	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.79	0.60
1:CA:17:U:H2'	1:CA:18:C:C6	2.37	0.60
1:CA:862:C:N3	1:CA:863:U:C5	2.69	0.60
1:CA:1297:G:O2'	7:CG:114:LYS:NZ	2.27	0.60
11:CK:107:ILE:HG23	11:CK:107:ILE:O	2.02	0.60
22:DA:455:C:N3	22:DA:472:A:H2'	2.17	0.60
22:DA:2854:G:C2	22:DA:2864:G:C2	2.90	0.60
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.45	0.60
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.02	0.59
3:AC:206:GLU:O	3:AC:207:ILE:O	2.19	0.59
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.15	0.59
22:BA:12:U:H2'	22:BA:12:U:O2	2.00	0.59
22:BA:511:U:H5	22:BA:512:G:C5	2.17	0.59
22:BA:1180:U:O2'	22:BA:1181:U:H5'	2.02	0.59
26:BE:189:THR:O	26:BE:190:ALA:C	2.45	0.59
41:BT:88:LYS:O	41:BT:89:GLU:CG	2.49	0.59
1:CA:1000:A:H2'	1:CA:1001:C:O4'	2.02	0.59
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.35	0.59
4:CD:148:LYS:O	4:CD:149:ALA:CB	2.49	0.59
22:DA:1304:A:C6	22:DA:1305:C:C4	2.89	0.59
22:DA:1450:G:C6	22:DA:1451:C:N4	2.70	0.59
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	1.83	0.59
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.01	0.59
25:DD:48:ILE:HG23	25:DD:84:LEU:CD2	2.32	0.59
1:AA:645:G:C6	1:AA:646:G:N7	2.71	0.59
4:AD:30:THR:C	4:AD:31:LYS:HD3	2.27	0.59
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.32	0.59
22:BA:78:U:H2'	22:BA:79:C:C6	2.37	0.59
22:BA:619:G:O6	26:BE:98:LYS:NZ	2.34	0.59
22:BA:973:A:O4'	22:BA:1188:U:C6	2.55	0.59
22:BA:2297:A:N1	22:BA:2321:U:H5	1.99	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.37	0.59
41:BT:54:GLU:HB3	41:BT:88:LYS:HG3	1.84	0.59
12:CL:90:LEU:O	12:CL:93:VAL:HG22	2.01	0.59
22:DA:197:A:H62	22:DA:2430:A:H2'	1.67	0.59
22:DA:287:G:C2	22:DA:354:A:C2	2.89	0.59
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.50	0.59
4:AD:98:LEU:O	4:AD:100:ASN:N	2.35	0.59
14:AN:46:LEU:C	14:AN:46:LEU:HD12	2.27	0.59
22:BA:636:G:N7	33:BL:109:LYS:HE2	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:669:G:C5	22:BA:801:G:C6	2.90	0.59
24:BC:4:VAL:HG12	24:BC:5:LYS:O	2.02	0.59
43:BV:13:GLY:O	43:BV:17:SER:OG	2.21	0.59
1:CA:429:U:O3'	4:CD:22:LYS:HE3	2.02	0.59
1:CA:718:A:C5	11:CK:118:HIS:CD2	2.90	0.59
22:DA:300:A:N6	57:DA:3551:HOH:O	2.35	0.59
22:DA:586:A:N1	22:DA:809:G:O2'	2.28	0.59
22:DA:1288:G:C4	22:DA:1327:A:C2	2.91	0.59
22:DA:1649:G:C6	22:DA:2009:A:C6	2.90	0.59
22:DA:1805:A:C2	22:DA:1813:G:C2	2.90	0.59
22:DA:2199:A:C4	22:DA:2225:A:C2	2.90	0.59
13:AM:6:GLY:O	13:AM:8:ASN:N	2.35	0.59
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.17	0.59
22:BA:1415:U:O2	22:BA:1415:U:H2'	2.02	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.45	0.59
38:BQ:108:ALA:HB1	39:BR:48:LYS:HZ1	1.67	0.59
50:B2:29:GLN:O	50:B2:33:ARG:HG3	2.03	0.59
53:B5:167:ASP:CB	53:B5:176:VAL:O	2.51	0.59
1:CA:31:G:C5	1:CA:306:A:H1'	2.37	0.59
22:DA:1121:C:C2	22:DA:1122:G:C8	2.90	0.59
22:DA:1789:A:H5"	24:DC:219:THR:O	2.02	0.59
22:DA:2144:G:C2	22:DA:2146:C:O2	2.55	0.59
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.02	0.59
31:DJ:4:PHE:O	38:DQ:64:ARG:NH2	2.34	0.59
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.01	0.59
1:AA:68:G:C5	1:AA:69:G:H1'	2.38	0.59
1:AA:144:G:C4	1:AA:179:A:C2	2.90	0.59
1:AA:1142:G:C4	1:AA:1143:G:H1'	2.38	0.59
1:AA:1181:G:C2	1:AA:1182:G:N2	2.70	0.59
8:AH:30:SER:O	8:AH:31:LYS:C	2.45	0.59
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.02	0.59
22:BA:273:G:N2	22:BA:365:U:C2	2.70	0.59
22:BA:700:G:O2'	22:BA:1632:A:N3	2.33	0.59
22:BA:1917:U:O2	22:BA:1917:U:H2'	2.02	0.59
23:BB:2:G:C2	23:BB:119:A:C2	2.90	0.59
25:BD:104:VAL:O	25:BD:105:LYS:HB2	2.00	0.59
1:CA:38:G:C2	1:CA:397:A:C2	2.90	0.59
22:DA:294:A:C2	22:DA:346:A:N6	2.70	0.59
22:DA:1907:G:C2	22:DA:1924:C:C2	2.90	0.59
22:DA:2816:G:N3	22:DA:2883:A:O2'	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:18:ASP:OD1	42:DU:18:ASP:N	2.35	0.59
1:AA:570:G:O6	1:AA:865:A:N6	2.35	0.59
1:AA:1257:A:H4'	1:AA:1258:G:OP2	2.02	0.59
4:AD:2:ALA:O	4:AD:68:LEU:HD21	2.02	0.59
22:BA:669:G:C6	22:BA:801:G:O6	2.56	0.59
22:BA:1087:G:N2	22:BA:1090:A:C8	2.71	0.59
22:BA:1654:A:OP2	35:BN:1:MET:HA	2.02	0.59
22:BA:1712:U:OP2	22:BA:1713:A:O2'	2.20	0.59
31:BJ:42:ALA:O	38:BQ:64:ARG:HG2	2.01	0.59
42:BU:18:ASP:O	42:BU:19:LYS:C	2.45	0.59
1:CA:951:G:C6	1:CA:952:U:C4	2.91	0.59
11:CK:52:PHE:CZ	11:CK:62:ALA:HA	2.37	0.59
22:DA:1440:U:H2'	22:DA:1441:G:O4'	2.03	0.59
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.35	0.59
28:DG:19:ILE:O	28:DG:21:GLY:N	2.35	0.59
48:D0:54:VAL:O	48:D0:56:ALA:N	2.36	0.59
1:AA:173:U:C2	1:AA:197:A:N1	2.71	0.59
1:AA:1277:C:O2'	1:AA:1279:G:H1'	2.03	0.59
8:AH:125:ILE:O	8:AH:125:ILE:HG13	2.02	0.59
22:BA:197:A:N6	22:BA:2430:A:H2'	2.17	0.59
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.80	0.59
22:BA:1916:A:C5	22:BA:1917:U:C6	2.91	0.59
23:BB:48:U:H2'	23:BB:49:C:C6	2.37	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.35	0.59
1:CA:1074:G:H4'	2:CB:103:ASN:HB3	1.83	0.59
3:CC:3:GLN:OE1	3:CC:3:GLN:N	2.36	0.59
22:DA:388:G:N7	22:DA:390:U:H2'	2.17	0.59
22:DA:724:U:H2'	22:DA:725:G:O4'	2.02	0.59
22:DA:893:C:H2'	22:DA:894:U:O4'	2.02	0.59
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.38	0.59
22:DA:1936:A:H2	22:DA:1943:U:H3	1.51	0.59
22:DA:2093:G:O2'	29:DH:25:TYR:CA	2.50	0.59
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.03	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.85	0.59
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.85	0.59
5:AE:137:VAL:O	5:AE:137:VAL:CG2	2.51	0.59
24:BC:167:ARG:O	24:BC:168:ASP:HB3	2.03	0.59
46:BY:15:ASN:O	46:BY:19:LEU:HG	2.02	0.59
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.37	0.59
1:CA:1377:A:C5	7:CG:7:ILE:CD1	2.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:151:LYS:HA	4:CD:178:MET:HE1	1.85	0.59
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.02	0.59
43:DV:51:GLN:OE1	43:DV:57:TYR:OH	2.21	0.59
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.18	0.59
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.03	0.59
4:AD:32:CYS:SG	4:AD:33:LYS:N	2.76	0.59
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.35	0.59
12:AL:22:PRO:C	12:AL:24:LEU:N	2.61	0.59
22:BA:564:C:O2	22:BA:578:G:N2	2.35	0.59
22:BA:1277:G:C5'	35:BN:20:MET:CE	2.81	0.59
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.03	0.59
24:BC:30:PHE:CZ	24:BC:32:PRO:HG2	2.38	0.59
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.59
33:BL:93:ASN:O	33:BL:94:THR:HB	2.02	0.59
5:CE:99:ALA:O	5:CE:122:ASN:ND2	2.35	0.59
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.81	0.59
22:DA:54:G:C2	22:DA:55:G:C8	2.90	0.59
22:DA:104:A:H2'	22:DA:105:C:O4'	2.03	0.59
22:DA:1783:A:C6	22:DA:2587:A:C2	2.91	0.59
1:AA:438:U:C2	1:AA:494:G:C6	2.90	0.59
1:AA:946:A:O2'	1:AA:1333:A:N3	2.35	0.59
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.86	0.59
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.38	0.59
22:DA:479:A:H4'	22:DA:480:A:OP1	2.02	0.59
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.38	0.59
27:DF:147:ASP:O	27:DF:148:ARG:HB2	2.03	0.59
35:DN:76:VAL:HA	35:DN:79:LEU:HD12	1.84	0.59
1:AA:484:G:H4'	1:AA:485:U:OP1	2.02	0.58
1:AA:657:U:O2	15:AO:22:THR:CG2	2.50	0.58
1:AA:923:A:O4'	1:AA:1398:A:C2	2.56	0.58
2:AB:83:ALA:HA	2:AB:86:SER:OG	2.03	0.58
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.02	0.58
22:BA:1467:U:C4	22:BA:1546:G:C2	2.91	0.58
22:BA:1485:U:H2'	22:BA:1486:U:C6	2.37	0.58
22:BA:1494:A:C2	22:BA:1495:A:C4	2.91	0.58
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.17	0.58
22:BA:2666:C:C5	22:BA:2667:C:C5	2.91	0.58
29:BH:83:LYS:HD2	1:CA:55:A:O2'	2.02	0.58
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.84	0.58
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.03	0.58
53:B5:40:GLU:HA	53:B5:181:PHE:HA	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1125:U:C6	10:CJ:40:ILE:HD13	2.37	0.58
4:CD:167:LYS:HE2	4:CD:173:VAL:HG11	1.85	0.58
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.84	0.58
22:DA:82:U:C2	22:DA:83:A:N7	2.71	0.58
22:DA:936:A:C2	22:DA:937:C:C2	2.91	0.58
22:DA:1075:C:H2'	22:DA:1076:C:C6	2.38	0.58
22:DA:1805:A:O2'	24:DC:50:THR:HA	2.03	0.58
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.36	0.58
22:DA:2199:A:N7	22:DA:2225:A:C6	2.71	0.58
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.17	0.58
1:AA:645:G:N7	57:AA:1749:HOH:O	2.32	0.58
2:AB:9:MET:N	2:AB:9:MET:SD	2.76	0.58
4:AD:26:ARG:CD	4:AD:31:LYS:HE3	2.33	0.58
6:AF:97:THR:O	6:AF:98:GLU:HB3	2.02	0.58
7:AG:71:PRO:O	7:AG:96:ARG:CG	2.51	0.58
11:AK:112:ASP:OD1	11:AK:112:ASP:C	2.46	0.58
12:AL:22:PRO:C	12:AL:24:LEU:H	2.11	0.58
22:BA:1734:G:C4	22:BA:1735:A:C8	2.91	0.58
24:BC:182:ARG:HH21	24:BC:182:ARG:HG3	1.67	0.58
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.84	0.58
1:CA:227:G:H2'	1:CA:228:A:O4'	2.02	0.58
4:CD:126:ASN:OD1	4:CD:142:VAL:HG23	2.02	0.58
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.39	0.58
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.37	0.58
22:DA:2843:G:C2	22:DA:2875:C:N3	2.71	0.58
24:DC:260:ASN:O	24:DC:261:LYS:HB2	2.03	0.58
35:DN:83:LEU:HD23	35:DN:86:ARG:CZ	2.33	0.58
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.03	0.58
1:AA:102:G:C2	1:AA:103:U:C6	2.91	0.58
1:AA:194:C:C2'	1:AA:195:A:H5'	2.33	0.58
1:AA:408:A:C2	1:AA:435:A:C2	2.91	0.58
1:AA:428:G:O4'	1:AA:430:A:C8	2.56	0.58
1:AA:982:U:H4'	1:AA:983:A:C5'	2.33	0.58
4:AD:62:ARG:HG3	4:AD:72:PHE:CD2	2.38	0.58
16:AP:1:MET:O	16:AP:24:SER:OG	2.20	0.58
16:AP:43:ALA:O	16:AP:46:LYS:HD2	2.03	0.58
22:BA:31:C:O2'	22:BA:32:C:H5'	2.03	0.58
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.37	0.58
22:BA:1914:C:O2	22:BA:1914:C:H2'	2.03	0.58
22:BA:2773:C:H5"	25:BD:169:ARG:HG2	1.85	0.58
24:BC:86:ASN:HD22	24:BC:86:ASN:N	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.28	0.58
1:CA:247:G:C6	1:CA:278:G:C2	2.92	0.58
1:CA:1133:G:C2	1:CA:1142:G:C2	2.91	0.58
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.51	0.58
1:CA:1490:U:H2'	1:CA:1491:G:O4'	2.03	0.58
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.18	0.58
11:CK:44:TRP:O	11:CK:44:TRP:CE3	2.57	0.58
22:DA:187:G:C2	22:DA:210:C:O2	2.54	0.58
22:DA:533:G:H5'	38:DQ:24:TYR:CE1	2.38	0.58
22:DA:1034:G:C6	22:DA:1035:U:N3	2.71	0.58
22:DA:2094:A:H5'	29:DH:25:TYR:HB2	1.85	0.58
24:DC:3:VAL:CG1	24:DC:202:LEU:HD23	2.33	0.58
24:DC:148:PRO:CD	24:DC:185:GLU:OE2	2.51	0.58
25:DD:48:ILE:HG23	25:DD:84:LEU:HD21	1.85	0.58
28:DG:159:GLY:O	28:DG:163:ARG:NH1	2.37	0.58
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.33	0.58
6:AF:98:GLU:O	6:AF:99:ALA:O	2.22	0.58
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.72	0.58
22:BA:245:G:O6	51:B3:8:ARG:HD3	2.03	0.58
22:BA:878:A:H5'	22:BA:879:G:OP2	2.03	0.58
22:BA:2458:G:N3	22:BA:2490:G:N2	2.52	0.58
22:BA:2593:U:N3	22:BA:2594:C:C5	2.71	0.58
51:B3:31:HIS:C	51:B3:31:HIS:CD2	2.81	0.58
1:CA:858:G:O6	1:CA:869:G:H3'	2.03	0.58
1:CA:1080:A:OP1	5:CE:52:LYS:CE	2.52	0.58
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.84	0.58
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.03	0.58
3:CC:150:LYS:HG2	3:CC:201:TRP:CE3	2.38	0.58
17:CQ:12:VAL:HG23	17:CQ:57:ASP:O	2.03	0.58
22:DA:579:G:N2	22:DA:1262:A:C4	2.72	0.58
22:DA:696:G:C6	22:DA:767:U:C2	2.92	0.58
22:DA:1973:G:C5	22:DA:1974:C:C4	2.92	0.58
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.03	0.58
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.14	0.58
1:AA:373:A:C2	1:AA:374:A:C8	2.92	0.58
2:AB:126:PHE:N	2:AB:126:PHE:HD1	2.02	0.58
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.84	0.58
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.51	0.58
22:BA:1915:U:O2'	22:BA:1916:A:H5'	2.02	0.58
22:BA:1924:C:O2	22:BA:1926:U:O4	2.21	0.58
27:BF:105:THR:HG23	27:BF:106:ILE:CG2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:37:LEU:C	46:BY:37:LEU:HD12	2.29	0.58
1:CA:555:U:H2'	1:CA:556:C:C6	2.38	0.58
1:CA:622:A:H5"	1:CA:623:C:OP2	2.04	0.58
13:CM:93:ARG:CZ	13:CM:93:ARG:HB3	2.31	0.58
21:CU:11:PRO:C	21:CU:12:PHE:CG	2.79	0.58
22:DA:197:A:C8	22:DA:2430:A:C8	2.90	0.58
22:DA:1436:G:N2	22:DA:1557:C:C2	2.72	0.58
1:AA:11:G:C6	1:AA:12:U:C4	2.91	0.58
1:AA:767:A:H2'	1:AA:768:A:O4'	2.03	0.58
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.18	0.58
2:AB:67:ILE:O	2:AB:68:LEU:HB2	2.01	0.58
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.17	0.58
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.04	0.58
22:BA:65:U:H2'	22:BA:66:C:H6	1.68	0.58
22:BA:2684:U:C4	22:BA:2685:G:N7	2.72	0.58
23:BB:30:C:H2'	23:BB:31:C:H5'	1.86	0.58
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.04	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58
38:BQ:50:ARG:O	38:BQ:54:LYS:HE2	2.04	0.58
1:CA:16:A:C2'	1:CA:17:U:H5'	2.34	0.58
1:CA:109:A:O2'	1:CA:326:G:N2	2.37	0.58
1:CA:861:G:C5	1:CA:862:C:C5	2.92	0.58
1:CA:1055:A:C6	1:CA:1206:G:C5	2.92	0.58
17:CQ:46:VAL:HG22	17:CQ:61:ILE:HD11	1.85	0.58
22:DA:371:A:N3	45:DX:61:LYS:NZ	2.50	0.58
22:DA:973:A:OP2	39:DR:81:LYS:NZ	2.27	0.58
22:DA:1323:C:C4	22:DA:1324:G:N7	2.72	0.58
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.38	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
1:AA:316:C:C2	1:AA:317:U:C5	2.92	0.58
1:AA:468:A:C2	1:AA:469:C:C5	2.91	0.58
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.02	0.58
10:AJ:15:HIS:O	10:AJ:17:LEU:N	2.34	0.58
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.19	0.58
22:BA:1842:G:H2'	22:BA:1843:C:O4'	2.03	0.58
22:BA:2531:A:OP2	28:BG:174:ALA:O	2.22	0.58
22:BA:2846:G:OP1	37:BP:53:ARG:NH1	2.37	0.58
25:BD:207:VAL:O	25:BD:207:VAL:HG22	2.04	0.58
27:BF:143:TYR:O	27:BF:146:VAL:HG22	2.04	0.58
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.85	0.58
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.19	0.58
22:DA:301:G:N3	22:DA:302:C:C2	2.72	0.58
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.38	0.58
22:DA:1064:C:N3	22:DA:1074:G:N2	2.51	0.58
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.38	0.58
22:DA:2142:A:C2	22:DA:2150:C:N3	2.72	0.58
22:DA:2163:A:OP1	22:DA:2171:A:C8	2.56	0.58
22:DA:2330:G:N2	22:DA:2386:A:C2	2.70	0.58
22:DA:2842:G:C6	22:DA:2876:G:C6	2.92	0.58
23:DB:94:A:OP1	43:DV:19:ARG:HD3	2.03	0.58
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.52	0.58
45:DX:30:LEU:HB3	45:DX:31:PRO:CD	2.34	0.58
1:AA:507:C:C2	1:AA:508:U:C5	2.92	0.58
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.85	0.58
10:AJ:52:LEU:HD11	10:AJ:59:LYS:HA	1.84	0.58
22:BA:570:G:H2'	22:BA:2030:A:N7	2.19	0.58
25:BD:121:THR:HB	25:BD:127:PHE:CD2	2.39	0.58
27:BF:124:GLY:C	27:BF:125:ARG:HG2	2.27	0.58
32:BK:107:LEU:O	32:BK:109:SER:N	2.37	0.58
1:CA:518:C:H4'	1:CA:519:C:O5'	2.03	0.58
1:CA:609:A:N7	57:CA:1797:HOH:O	2.32	0.58
1:CA:846:G:C2	1:CA:847:G:C8	2.92	0.58
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.86	0.58
17:CQ:19:LYS:HD3	17:CQ:49:GLU:HA	1.85	0.58
22:DA:27:G:N2	22:DA:512:G:H1'	2.19	0.58
22:DA:70:G:N2	22:DA:71:A:N1	2.51	0.58
22:DA:524:G:C5	22:DA:525:U:C5	2.91	0.58
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.51	0.58
22:DA:938:G:C2	22:DA:939:G:N7	2.72	0.58
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.03	0.58
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.03	0.58
36:DO:18:LEU:O	36:DO:22:GLY:N	2.37	0.58
1:AA:554:A:H5'	12:AL:26:ALA:HB1	1.85	0.58
3:AC:10:ILE:O	3:AC:10:ILE:HG13	2.02	0.58
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.33	0.58
14:AN:20:TYR:CE1	14:AN:52:PRO:HG2	2.39	0.58
22:BA:357:C:H2'	22:BA:358:U:C6	2.39	0.58
30:BI:82:LYS:O	30:BI:83:ALA:HB2	2.02	0.58
1:CA:1092:A:C2	1:CA:1183:U:O2	2.57	0.58
10:CJ:35:GLN:HG2	10:CJ:77:VAL:HB	1.85	0.58
12:CL:92:GLY:O	12:CL:93:VAL:C	2.47	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:190:A:O2'	22:DA:679:C:O2'	2.16	0.58
22:DA:607:U:O4	22:DA:619:G:H2'	2.03	0.58
1:AA:406:G:O5'	4:AD:5:LEU:HD21	2.04	0.58
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.38	0.58
2:AB:126:PHE:N	2:AB:126:PHE:CD1	2.72	0.58
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.39	0.58
4:AD:191:LEU:O	4:AD:192:SER:CB	2.51	0.58
8:AH:14:ILE:O	8:AH:15:ARG:C	2.47	0.58
19:AS:5:LEU:HD22	19:AS:9:PRO:HA	1.86	0.58
22:BA:1925:C:C4'	22:BA:1926:U:C4	2.87	0.58
22:BA:2502:G:H5'	22:BA:2503:A:H5"	1.84	0.58
22:BA:2669:G:O2'	22:BA:2670:A:H5'	2.04	0.58
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.04	0.58
24:BC:85:PRO:HG2	24:BC:86:ASN:ND2	2.19	0.58
32:BK:92:GLU:HG3	32:BK:111:LYS:NZ	2.19	0.58
39:BR:66:HIS:CE1	39:BR:94:THR:HB	2.38	0.58
1:CA:513:C:H2'	1:CA:514:C:C6	2.39	0.58
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.04	0.58
5:CE:57:PRO:O	5:CE:60:ILE:HG13	2.04	0.58
9:CI:49:ARG:C	9:CI:49:ARG:HD3	2.29	0.58
13:CM:10:PRO:O	13:CM:11:ASP:HB2	2.02	0.58
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.03	0.58
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.51	0.58
22:DA:77:G:OP1	46:DY:52:ARG:HD3	2.03	0.58
22:DA:279:A:C2	22:DA:362:A:H4'	2.38	0.58
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.85	0.58
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.19	0.58
27:DF:122:PHE:CE1	27:DF:166:GLY:C	2.82	0.58
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.86	0.58
1:AA:1288:A:C6	1:AA:1289:A:C5	2.91	0.57
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.52	0.57
22:BA:322:A:C5	22:BA:340:A:C2	2.92	0.57
22:BA:686:U:H2'	22:BA:788:A:N1	2.19	0.57
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.39	0.57
22:BA:1439:A:C2	22:BA:1553:A:C4	2.92	0.57
9:CI:57:MET:SD	9:CI:58:VAL:N	2.76	0.57
22:DA:945:A:C8	22:DA:2448:A:C2	2.91	0.57
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.39	0.57
22:DA:1823:G:N7	57:DA:3651:HOH:O	2.37	0.57
22:DA:2267:A:H5"	22:DA:2268:A:C5'	2.34	0.57
22:DA:2822:G:H2'	22:DA:2823:A:H5"	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.57
35:DN:117:ASP:O	35:DN:118:ARG:HG3	2.04	0.57
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.57	0.57
41:DT:39:THR:O	41:DT:41:ALA:N	2.38	0.57
1:AA:1141:C:O2'	1:AA:1142:G:P	2.62	0.57
1:AA:1310:G:OP2	13:AM:87:ARG:NH2	2.37	0.57
2:AB:103:ASN:O	2:AB:106:THR:N	2.37	0.57
16:AP:79:ASN:O	16:AP:80:LYS:HB2	2.04	0.57
22:BA:2584:U:H2'	22:BA:2585:U:H2'	1.86	0.57
23:BB:54:G:H21	27:BF:26:MET:CE	2.17	0.57
26:BE:21:ARG:HD3	26:BE:106:LYS:HB3	1.86	0.57
33:BL:85:VAL:CG1	33:BL:94:THR:HG22	2.33	0.57
36:BO:87:ILE:HG22	36:BO:88:LYS:N	2.17	0.57
3:CC:42:TYR:CZ	3:CC:46:GLU:HG3	2.39	0.57
13:CM:10:PRO:O	13:CM:11:ASP:CB	2.52	0.57
22:DA:864:G:C6	22:DA:865:C:N4	2.72	0.57
22:DA:1401:G:C5	22:DA:1402:U:C5	2.92	0.57
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.57	0.57
22:DA:2824:C:N4	22:DA:2825:G:N7	2.52	0.57
24:DC:251:GLN:HG2	24:DC:255:LYS:HB2	1.84	0.57
1:AA:208:U:C5	1:AA:210:C:N3	2.73	0.57
1:AA:596:A:C6	1:AA:645:G:C2	2.92	0.57
2:AB:87:CYS:HB2	2:AB:89:GLN:CD	2.30	0.57
7:AG:79:ARG:NH1	7:AG:82:GLY:O	2.37	0.57
9:AI:35:LEU:HD11	9:AI:48:VAL:HG21	1.87	0.57
11:AK:126:LYS:C	21:AU:34:ARG:CZ	2.77	0.57
22:BA:877:A:O2'	22:BA:900:A:N6	2.35	0.57
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.86	0.57
22:BA:2318:G:C6	22:BA:2319:G:N1	2.72	0.57
24:BC:77:VAL:HG23	24:BC:114:ASP:O	2.03	0.57
32:BK:121:GLU:O	32:BK:122:VAL:OXT	2.21	0.57
36:BO:66:GLY:HA2	36:BO:102:ARG:NH2	2.19	0.57
36:BO:87:ILE:O	36:BO:88:LYS:O	2.23	0.57
39:BR:27:ILE:CG2	39:BR:63:VAL:HG21	2.34	0.57
39:BR:48:LYS:O	39:BR:48:LYS:HG2	2.02	0.57
1:CA:994:A:N3	1:CA:994:A:H2'	2.19	0.57
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.58	0.57
2:CB:210:VAL:O	2:CB:214:LEU:HB2	2.05	0.57
7:CG:151:PHE:O	7:CG:152:ALA:HB2	2.04	0.57
22:DA:225:C:H2'	22:DA:226:A:O4'	2.03	0.57
22:DA:526:A:C6	22:DA:2626:C:H4'	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1774:C:O2	24:DC:11:PRO:HB2	2.03	0.57
22:DA:2683:C:OP1	37:DP:51:ARG:NH2	2.37	0.57
22:DA:2834:G:H2'	22:DA:2879:A:N6	2.20	0.57
24:DC:61:ALA:O	24:DC:63:ARG:NH2	2.37	0.57
33:DL:59:ARG:CZ	33:DL:59:ARG:HB3	2.34	0.57
35:DN:117:ASP:O	35:DN:118:ARG:CB	2.52	0.57
37:DP:65:SER:O	37:DP:66:ASN:C	2.47	0.57
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.38	0.57
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.86	0.57
17:AQ:49:GLU:O	17:AQ:50:ASN:OD1	2.21	0.57
21:AU:12:PHE:N	21:AU:12:PHE:CD1	2.72	0.57
22:BA:186:G:O2'	22:BA:187:G:H5'	2.04	0.57
1:CA:1084:G:C5	1:CA:1085:U:C4	2.92	0.57
1:CA:1179:A:O3'	9:CI:105:THR:OG1	2.22	0.57
2:CB:21:ARG:HA	2:CB:21:ARG:NH1	2.20	0.57
5:CE:104:GLY:O	5:CE:105:ILE:HG22	2.04	0.57
22:DA:192:C:O2'	22:DA:802:A:N3	2.36	0.57
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.86	0.57
24:DC:72:ASP:HA	24:DC:118:SER:O	2.04	0.57
24:DC:136:PRO:O	24:DC:139:SER:OG	2.18	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
1:AA:71:A:O2'	1:AA:72:A:P	2.63	0.57
1:AA:1145:A:O2'	1:AA:1146:A:C5'	2.51	0.57
2:AB:106:THR:O	2:AB:107:VAL:CB	2.52	0.57
3:AC:11:ARG:O	3:AC:14:ILE:N	2.37	0.57
3:AC:87:LEU:O	3:AC:88:ARG:C	2.47	0.57
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.03	0.57
27:BF:67:ILE:HD12	27:BF:67:ILE:O	2.04	0.57
44:BW:38:VAL:HG23	44:BW:59:LEU:HB2	1.85	0.57
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.04	0.57
22:DA:484:C:N4	22:DA:497:A:C2	2.72	0.57
22:DA:836:G:C5	22:DA:837:C:C4	2.92	0.57
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.05	0.57
22:DA:2125:G:H5'	22:DA:2126:A:OP2	2.04	0.57
22:DA:2379:G:H4'	36:DO:21:LEU:HD11	1.85	0.57
22:DA:2474:U:H5"	22:DA:2475:C:OP2	2.04	0.57
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.18	0.57
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.57
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.04	0.57
42:DU:98:SER:O	42:DU:99:ASN:HB3	2.03	0.57
1:AA:315:A:O2'	1:AA:330:C:H4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1126:U:O4'	1:AA:1281:C:O2	2.23	0.57
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.38	0.57
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	1.86	0.57
22:BA:588:U:H2'	22:BA:589:U:C6	2.39	0.57
22:BA:947:A:O2'	22:BA:984:A:H2	1.86	0.57
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.40	0.57
22:BA:2694:G:C2	22:BA:2695:U:C2	2.93	0.57
27:BF:5:HIS:O	27:BF:8:TYR:HB3	2.05	0.57
27:BF:34:ILE:HD11	27:BF:96:MET:HG3	1.87	0.57
30:BI:16:GLY:CA	30:BI:51:LYS:HB3	2.35	0.57
39:BR:46:GLU:OE1	39:BR:46:GLU:O	2.22	0.57
39:BR:49:ILE:CB	39:BR:52:PRO:O	2.53	0.57
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.53	0.57
22:DA:577:G:O2'	22:DA:1254:A:OP1	2.22	0.57
22:DA:595:C:O2	22:DA:663:G:C2	2.58	0.57
22:DA:2272:U:H5"	22:DA:2273:A:OP1	2.04	0.57
39:DR:83:TYR:CD1	39:DR:83:TYR:C	2.83	0.57
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.19	0.57
1:AA:89:U:O2'	1:AA:90:C:H5"	2.05	0.57
1:AA:389:A:C6	1:AA:390:U:H1'	2.39	0.57
2:AB:187:VAL:HG23	2:AB:187:VAL:O	2.04	0.57
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.39	0.57
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.87	0.57
22:BA:372:G:O2'	22:BA:400:G:O6	2.19	0.57
22:BA:1584:U:O2	22:BA:1584:U:H2'	2.04	0.57
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.38	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.04	0.57
1:CA:4:U:H5"	1:CA:5:U:OP1	2.05	0.57
1:CA:456:A:C6	1:CA:457:G:C5	2.92	0.57
1:CA:990:C:C4	1:CA:991:U:O4	2.57	0.57
12:CL:51:LYS:N	12:CL:51:LYS:HD2	2.19	0.57
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.05	0.57
22:DA:5:A:C2	22:DA:2899:A:C2	2.92	0.57
22:DA:38:A:C2	22:DA:442:G:C6	2.93	0.57
22:DA:161:A:C3'	22:DA:162:U:H5"	2.34	0.57
22:DA:649:G:H2'	22:DA:650:C:C6	2.40	0.57
22:DA:1171:G:C2	22:DA:1179:G:O6	2.58	0.57
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.39	0.57
22:DA:1323:C:N4	22:DA:1324:G:O6	2.37	0.57
22:DA:1691:C:C4	22:DA:1692:U:C5	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1808:A:H3'	22:DA:1809:A:C8	2.39	0.57
22:DA:2511:U:C4	22:DA:2512:C:C4	2.93	0.57
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.57
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.05	0.57
1:AA:1160:G:O2'	1:AA:1161:C:P	2.63	0.57
1:AA:1441:A:H2'	1:AA:1442:G:O5'	2.04	0.57
3:AC:15:VAL:HG11	3:AC:179:ARG:O	2.05	0.57
4:AD:105:MET:HB2	4:AD:107:PHE:CE2	2.40	0.57
4:AD:123:ILE:N	4:AD:123:ILE:CD1	2.67	0.57
6:AF:93:LYS:HG2	6:AF:93:LYS:O	2.04	0.57
9:AI:86:ALA:C	9:AI:88:MET:N	2.61	0.57
22:BA:244:A:OP2	51:B3:8:ARG:NH2	2.30	0.57
22:BA:1196:C:O4'	22:BA:1226:A:C2	2.58	0.57
22:BA:1866:A:N1	22:BA:1876:A:C8	2.72	0.57
24:BC:141:VAL:HG13	24:BC:191:THR:C	2.30	0.57
27:BF:2:ALA:O	27:BF:3:LYS:C	2.48	0.57
53:B5:64:SER:O	53:B5:65:LEU:CB	2.52	0.57
1:CA:197:A:O2'	1:CA:220:G:N2	2.38	0.57
1:CA:881:G:C6	1:CA:882:C:C4	2.93	0.57
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.85	0.57
11:CK:89:PRO:HD3	21:CU:29:LEU:CD1	2.34	0.57
22:DA:583:G:C6	22:DA:584:C:C4	2.93	0.57
22:DA:2112:G:H2'	22:DA:2112:G:N3	2.20	0.57
22:DA:2199:A:C5	22:DA:2225:A:C6	2.93	0.57
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.40	0.57
34:DM:53:MET:HE1	34:DM:103:TYR:CG	2.39	0.57
35:DN:1:MET:HE2	35:DN:1:MET:H1	1.68	0.57
35:DN:72:ASP:CG	35:DN:75:ILE:HG12	2.30	0.57
40:DS:66:ILE:O	40:DS:67:ASP:C	2.47	0.57
1:AA:90:C:H1'	1:AA:91:U:H5'	1.86	0.57
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.72	0.57
1:AA:451:A:H5"	16:AP:70:ARG:NH2	2.20	0.57
1:AA:901:A:N7	1:AA:902:G:H1'	2.18	0.57
16:AP:11:ALA:O	16:AP:12:LYS:C	2.47	0.57
22:BA:265:A:N1	22:BA:427:U:O2'	2.36	0.57
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.68	0.57
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.68	0.57
32:BK:87:LEU:HD13	32:BK:92:GLU:HB3	1.87	0.57
49:B1:32:GLU:OE2	49:B1:32:GLU:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:607:A:C2	1:CA:608:A:C4	2.93	0.57
1:CA:679:C:O2	1:CA:712:A:C2	2.58	0.57
1:CA:688:G:O2'	1:CA:704:A:N1	2.34	0.57
1:CA:728:A:C6	1:CA:729:A:C6	2.92	0.57
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.39	0.57
9:CI:54:LEU:O	9:CI:55:VAL:HG22	2.04	0.57
10:CJ:25:ILE:O	10:CJ:25:ILE:HD13	2.04	0.57
22:DA:564:C:H1'	38:DQ:37:GLN:NE2	2.20	0.57
22:DA:720:U:H2'	22:DA:721:A:C8	2.39	0.57
22:DA:1080:A:N6	22:DA:1087:G:OP2	2.36	0.57
22:DA:1566:A:N1	24:DC:213:TRP:CE3	2.73	0.57
22:DA:1731:G:C6	22:DA:1733:G:C5	2.93	0.57
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	2.37	0.57
30:DI:58:VAL:O	30:DI:69:PHE:HB3	2.04	0.57
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	1.86	0.57
1:AA:19:A:N3	1:AA:917:G:C2	2.72	0.57
1:AA:108:G:C6	20:AT:10:ARG:HG2	2.40	0.57
1:AA:203:G:N2	1:AA:215:C:C2	2.73	0.57
1:AA:721:G:H4'	1:AA:722:G:O4'	2.05	0.57
6:AF:7:VAL:O	6:AF:7:VAL:CG2	2.50	0.57
9:AI:58:VAL:O	9:AI:59:GLU:CG	2.52	0.57
12:AL:122:PRO:O	12:AL:124:ALA:N	2.38	0.57
22:BA:686:U:H4'	22:BA:687:C:OP2	2.05	0.57
22:BA:905:A:C6	22:BA:906:U:C5	2.93	0.57
22:BA:1433:A:O2'	22:BA:1434:A:H5'	2.05	0.57
22:BA:2452:C:C2	55:BA:3001:VIR:H131	2.39	0.57
22:BA:2520:C:O2'	22:BA:2521:C:H5'	2.05	0.57
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.57
36:BO:88:LYS:O	36:BO:89:ASP:HB2	2.05	0.57
46:BY:34:SER:O	46:BY:35:GLY:C	2.47	0.57
1:CA:96:U:O2'	1:CA:97:G:P	2.63	0.57
5:CE:141:ILE:O	5:CE:143:GLY:N	2.38	0.57
22:DA:24:G:C6	22:DA:25:U:C4	2.93	0.57
22:DA:449:A:C5	22:DA:450:G:C8	2.93	0.57
22:DA:749:A:C4	22:DA:750:A:C8	2.93	0.57
22:DA:945:A:C5	22:DA:2448:A:C2	2.93	0.57
22:DA:1390:U:H2'	22:DA:1391:U:H5'	1.87	0.57
22:DA:1627:G:C2	22:DA:1628:G:N7	2.73	0.57
22:DA:2199:A:C6	22:DA:2200:C:C2	2.92	0.57
31:DJ:105:VAL:HG12	31:DJ:109:LEU:HD12	1.87	0.57
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:102:G:C2	1:AA:103:U:C5	2.93	0.56
1:AA:119:A:C2	1:AA:240:G:C8	2.93	0.56
1:AA:213:G:C8	1:AA:214:C:C5	2.93	0.56
1:AA:663:A:C2	1:AA:743:A:C2	2.93	0.56
22:BA:2345:G:C4	22:BA:2381:A:C2	2.93	0.56
24:BC:76:ALA:HB2	24:BC:96:TYR:CD2	2.40	0.56
25:BD:8:LYS:NZ	25:BD:195:GLY:O	2.35	0.56
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.87	0.56
1:CA:35:G:O2'	12:CL:115:SER:O	2.20	0.56
1:CA:256:U:H2'	1:CA:257:G:O4'	2.04	0.56
1:CA:1161:C:O2	1:CA:1176:A:C2	2.58	0.56
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.86	0.56
22:DA:187:G:N2	22:DA:210:C:C2	2.73	0.56
22:DA:532:A:H2'	22:DA:532:A:N3	2.20	0.56
22:DA:2297:A:N1	22:DA:2321:U:C5	2.73	0.56
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.53	0.56
22:DA:2345:G:C5	22:DA:2347:C:C5	2.93	0.56
22:DA:2505:G:HO2'	22:DA:2506:U:H5	1.48	0.56
22:DA:2624:G:H1'	48:D0:19:HIS:CE1	2.40	0.56
27:DF:5:HIS:HB2	27:DF:97:TRP:CG	2.40	0.56
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.87	0.56
42:DU:7:ARG:HD3	42:DU:7:ARG:C	2.29	0.56
42:DU:45:HIS:HB3	42:DU:58:ILE:HG12	1.87	0.56
1:AA:402:G:C5	1:AA:403:C:C5	2.94	0.56
1:AA:843:U:OP1	1:AA:846:G:N2	2.38	0.56
1:AA:874:G:C6	1:AA:875:U:C4	2.93	0.56
1:AA:1315:U:O4	1:AA:1316:G:C6	2.58	0.56
7:AG:97:ASN:HA	7:AG:100:ALA:HB3	1.87	0.56
9:AI:61:LEU:N	9:AI:61:LEU:CD2	2.68	0.56
22:BA:536:G:C6	22:BA:537:G:C4	2.94	0.56
22:BA:682:G:H5'	50:B2:26:ASN:OD1	2.05	0.56
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.50	0.56
22:BA:1750:G:C6	22:BA:1751:U:C4	2.92	0.56
22:BA:2355:G:O3'	44:BW:24:LYS:NZ	2.38	0.56
22:BA:2452:C:C4	22:BA:2453:A:C6	2.93	0.56
23:BB:54:G:N2	27:BF:26:MET:HE3	2.20	0.56
29:BH:123:ARG:NH2	1:CA:367:U:C5'	2.68	0.56
1:CA:994:A:C8	1:CA:1216:A:H4'	2.40	0.56
1:CA:1095:U:P	57:CA:1855:HOH:O	2.62	0.56
2:CB:54:LEU:HD12	2:CB:220:THR:HG21	1.86	0.56
6:CF:22:ILE:O	6:CF:26:THR:OG1	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:69:LYS:O	17:CQ:70:THR:CB	2.53	0.56
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.86	0.56
22:DA:634:C:H2'	22:DA:635:C:C6	2.40	0.56
22:DA:1020:A:C2	22:DA:1141:U:C2	2.93	0.56
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.19	0.56
22:DA:2199:A:C1'	29:DH:28:ASN:HD22	2.00	0.56
22:DA:2261:C:C2	22:DA:2280:G:C2	2.92	0.56
38:DQ:102:ASP:OD2	39:DR:2:TYR:OH	2.18	0.56
1:AA:990:C:N3	1:AA:991:U:C4	2.73	0.56
1:AA:1126:U:C6	1:AA:1281:C:N3	2.74	0.56
2:AB:21:ARG:HA	2:AB:21:ARG:CZ	2.35	0.56
2:AB:94:HIS:O	2:AB:95:ARG:C	2.47	0.56
4:AD:70:ARG:O	4:AD:74:ASN:OD1	2.23	0.56
6:AF:39:LEU:O	6:AF:40:GLU:HG3	2.05	0.56
12:AL:21:VAL:CG2	12:AL:95:TYR:CE2	2.88	0.56
13:AM:16:VAL:HG13	13:AM:41:GLU:HB2	1.88	0.56
17:AQ:12:VAL:O	17:AQ:13:VAL:HB	2.05	0.56
17:AQ:15:ASP:C	17:AQ:17:MET:SD	2.89	0.56
22:BA:26:G:H1'	22:BA:514:A:N6	2.20	0.56
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.40	0.56
22:BA:120:U:P	57:BA:3216:HOH:O	2.64	0.56
22:BA:417:C:H2'	22:BA:418:C:H6	1.70	0.56
22:BA:479:A:H4'	22:BA:480:A:OP1	2.04	0.56
22:BA:958:U:OP2	34:BM:14:LYS:HE2	2.04	0.56
22:BA:1106:G:C2	22:BA:1107:G:C8	2.94	0.56
22:BA:1923:U:O2'	22:BA:1924:C:H5'	2.06	0.56
22:BA:2052:A:H4'	25:BD:148:GLN:O	2.03	0.56
22:BA:2192:U:C4	22:BA:2193:G:C8	2.94	0.56
22:BA:2444:G:OP2	26:BE:63:LYS:CD	2.53	0.56
36:BO:43:ASN:OD1	36:BO:45:SER:N	2.35	0.56
37:BP:52:ASN:O	37:BP:53:ARG:HD3	2.05	0.56
1:CA:355:C:H2'	1:CA:356:A:O4'	2.06	0.56
1:CA:369:G:OP2	1:CA:388:G:N1	2.34	0.56
1:CA:436:C:C2	1:CA:437:U:C5	2.94	0.56
5:CE:83:HIS:CD2	8:CH:96:MET:HE3	2.39	0.56
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.85	0.56
6:CF:88:MET:SD	6:CF:90:MET:SD	3.03	0.56
12:CL:25:GLU:C	12:CL:27:CYS:N	2.59	0.56
12:CL:40:THR:HG22	12:CL:41:THR:N	2.20	0.56
13:CM:6:GLY:O	13:CM:8:ASN:N	2.38	0.56
22:DA:247:G:OP2	22:DA:249:C:N4	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:301:G:H1'	22:DA:302:C:C6	2.40	0.56
22:DA:514:A:C2	22:DA:515:A:C4	2.93	0.56
22:DA:570:G:H2'	22:DA:571:U:H5'	1.86	0.56
22:DA:771:G:C2	22:DA:772:C:C6	2.93	0.56
22:DA:1091:G:N3	22:DA:1092:C:C5	2.74	0.56
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.41	0.56
22:DA:2142:A:N6	22:DA:2143:C:N4	2.53	0.56
22:DA:2478:A:C8	22:DA:2529:G:C5	2.94	0.56
27:DF:46:ASP:N	27:DF:46:ASP:OD1	2.39	0.56
27:DF:122:PHE:CE1	27:DF:166:GLY:HA3	2.40	0.56
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.40	0.56
34:DM:107:GLY:C	34:DM:108:VAL:HG22	2.30	0.56
42:DU:95:PHE:HA	42:DU:102:THR:HA	1.88	0.56
45:DX:78:TYR:OXT	45:DX:78:TYR:CD1	2.58	0.56
46:DY:27:ASN:HA	46:DY:30:MET:HB2	1.87	0.56
2:AB:104:TRP:CZ2	2:AB:154:MET:HB3	2.41	0.56
14:AN:52:PRO:O	14:AN:53:ARG:CB	2.53	0.56
19:AS:44:MET:HA	19:AS:47:LEU:HD12	1.86	0.56
22:BA:1277:G:C4'	35:BN:20:MET:HE2	2.36	0.56
24:BC:52:ARG:HB2	24:BC:53:HIS:CD2	2.39	0.56
27:BF:132:VAL:CG2	27:BF:152:LEU:HB2	2.34	0.56
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.21	0.56
33:BL:64:PHE:CD1	51:B3:47:LYS:HE2	2.39	0.56
1:CA:401:C:OP2	4:CD:70:ARG:HD3	2.05	0.56
2:CB:183:VAL:N	2:CB:197:ASP:OD1	2.38	0.56
15:CO:14:GLU:O	15:CO:84:ARG:NH2	2.39	0.56
16:CP:51:ARG:C	16:CP:51:ARG:HD3	2.31	0.56
22:DA:627:A:OP1	33:DL:78:ARG:NH1	2.38	0.56
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.40	0.56
22:DA:1411:U:H2'	22:DA:1412:U:O4'	2.05	0.56
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.05	0.56
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.86	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
36:DO:2:ASP:O	36:DO:6:ALA:HB2	2.06	0.56
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.52	0.56
1:AA:157:U:C2'	1:AA:158:G:H5'	2.36	0.56
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	1.87	0.56
10:AJ:81:GLU:O	10:AJ:84:VAL:HG12	2.04	0.56
11:AK:23:ILE:HG13	11:AK:23:ILE:O	2.04	0.56
16:AP:77:GLU:C	16:AP:79:ASN:H	2.12	0.56
22:BA:1246:A:H2'	22:BA:1247:A:O5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1801:A:N7	24:BC:262:ARG:NH2	2.53	0.56
22:BA:2267:A:H5"	22:BA:2268:A:H5'	1.88	0.56
23:BB:91:C:OP2	34:BM:18:ARG:HG2	2.05	0.56
29:BH:89:LYS:CG	1:CA:359:G:OP1	2.53	0.56
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.36	0.56
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.06	0.56
22:DA:289:G:N2	22:DA:352:A:C2	2.73	0.56
22:DA:1581:G:C6	22:DA:1582:C:C4	2.93	0.56
22:DA:2392:A:C8	22:DA:2429:G:C2	2.94	0.56
36:DO:26:LEU:HD23	36:DO:117:PHE:CE2	2.41	0.56
40:DS:29:VAL:CG1	40:DS:55:ILE:HD11	2.34	0.56
1:AA:587:G:C2	1:AA:755:G:C5	2.93	0.56
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	1.88	0.56
2:AB:82:ASP:C	2:AB:84:ALA:N	2.62	0.56
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.88	0.56
5:AE:109:GLY:O	5:AE:110:ALA:HB2	2.06	0.56
22:BA:84:A:N1	22:BA:98:G:O2'	2.33	0.56
22:BA:2318:G:C6	22:BA:2319:G:C6	2.94	0.56
27:BF:23:ASN:OD1	27:BF:23:ASN:N	2.39	0.56
27:BF:108:VAL:N	27:BF:109:PRO:HD2	2.21	0.56
28:BG:109:PHE:HE1	28:BG:152:ARG:CZ	2.17	0.56
36:BO:43:ASN:OD1	36:BO:45:SER:HB2	2.04	0.56
10:CJ:88:MET:O	10:CJ:89:ARG:CB	2.53	0.56
18:CR:24:LYS:C	18:CR:26:ILE:H	2.14	0.56
22:DA:26:G:C6	22:DA:27:G:N1	2.74	0.56
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.05	0.56
22:DA:1965:C:OP1	22:DA:1966:A:C2'	2.54	0.56
22:DA:2094:A:H5"	29:DH:25:TYR:CD2	2.41	0.56
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.41	0.56
22:DA:2796:U:O4	22:DA:2798:U:C4	2.58	0.56
33:DL:50:PHE:CZ	33:DL:52:GLY:O	2.59	0.56
1:AA:64:G:C8	1:AA:99:C:C4	2.93	0.56
1:AA:1378:C:C2'	1:AA:1379:G:O5'	2.54	0.56
1:AA:1493:A:C8	1:AA:1493:A:OP2	2.58	0.56
2:AB:67:ILE:HG21	2:AB:69:PHE:CE1	2.40	0.56
4:AD:98:LEU:O	4:AD:99:ASP:C	2.46	0.56
10:AJ:36:VAL:O	10:AJ:36:VAL:HG12	2.05	0.56
12:AL:44:LYS:CB	12:AL:45:PRO:HD3	2.35	0.56
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.21	0.56
22:BA:455:C:N3	22:BA:472:A:H2'	2.20	0.56
22:BA:1157:G:N2	22:BA:1158:C:C2	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1452:G:C4	22:BA:2702:G:C6	2.93	0.56
22:BA:1796:U:H2'	22:BA:1797:G:H8	1.71	0.56
22:BA:2694:G:C6	22:BA:2695:U:N3	2.74	0.56
26:BE:196:VAL:O	26:BE:197:GLU:C	2.47	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
29:BH:97:ARG:HD2	1:CA:369:G:O2'	2.06	0.56
41:BT:17:SER:O	41:BT:18:GLU:C	2.49	0.56
1:CA:477:C:H2'	1:CA:478:A:C8	2.41	0.56
1:CA:844:G:P	1:CA:844:G:O4'	2.64	0.56
1:CA:995:C:N3	1:CA:1046:A:O2'	2.39	0.56
2:CB:16:PHE:CZ	2:CB:18:HIS:CE1	2.94	0.56
2:CB:206:ALA:O	2:CB:207:ILE:C	2.47	0.56
3:CC:155:GLY:O	3:CC:156:ARG:C	2.49	0.56
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	1.87	0.56
22:DA:15:G:OP2	57:DA:3545:HOH:O	2.17	0.56
22:DA:271:G:H4'	22:DA:272:A:OP1	2.04	0.56
22:DA:1068:G:H2'	22:DA:1068:G:N3	2.20	0.56
22:DA:1828:G:P	57:DA:3450:HOH:O	2.63	0.56
22:DA:2146:C:H5"	22:DA:2147:A:OP1	2.06	0.56
28:DG:27:LYS:HG3	28:DG:27:LYS:O	2.04	0.56
1:AA:39:G:C2	1:AA:40:C:C6	2.93	0.56
1:AA:896:C:O2'	1:AA:897:C:H5'	2.05	0.56
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.30	0.56
2:AB:21:ARG:HA	2:AB:21:ARG:NE	2.20	0.56
5:AE:137:VAL:O	5:AE:137:VAL:HG22	2.05	0.56
22:BA:198:C:P	57:BA:3766:HOH:O	2.60	0.56
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.87	0.56
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.40	0.56
22:BA:1180:U:H2'	22:BA:1181:U:H5'	1.86	0.56
31:BJ:30:THR:CG2	31:BJ:31:GLU:N	2.69	0.56
1:CA:552:U:C2	1:CA:553:A:C8	2.93	0.56
1:CA:938:A:N6	1:CA:939:G:C6	2.74	0.56
2:CB:91:PHE:O	2:CB:150:GLY:HA3	2.05	0.56
2:CB:163:VAL:HG23	2:CB:185:ALA:HB2	1.86	0.56
5:CE:100:SER:O	5:CE:101:GLU:C	2.48	0.56
22:DA:147:C:N4	22:DA:148:U:O4	2.39	0.56
22:DA:1361:G:C2	22:DA:1362:C:C6	2.94	0.56
22:DA:1826:G:C6	22:DA:1827:U:C4	2.93	0.56
22:DA:2164:C:H5"	22:DA:2165:C:C5	2.41	0.56
22:DA:2734:A:N6	22:DA:2770:G:O2'	2.37	0.56
22:DA:2743:U:OP1	52:D4:34:LYS:NZ	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:71:C:H2'	23:DB:72:G:H5'	1.87	0.56
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.56
30:DI:6:GLN:O	30:DI:7:ALA:HB3	2.06	0.56
41:DT:38:ALA:O	41:DT:39:THR:HB	2.06	0.56
42:DU:72:ILE:HD11	42:DU:83:VAL:HG23	1.87	0.56
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.87	0.56
1:AA:254:G:OP1	17:AQ:68:SER:OG	2.23	0.56
1:AA:340:U:H2'	1:AA:341:C:H6	1.71	0.56
1:AA:560:A:H5'	1:AA:566:G:N2	2.21	0.56
1:AA:1023:U:H2'	1:AA:1024:G:C8	2.41	0.56
1:AA:1130:A:O3'	9:AI:5:GLN:NE2	2.39	0.56
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.41	0.56
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.69	0.56
2:AB:111:ILE:HD13	2:AB:111:ILE:N	2.21	0.56
2:AB:203:ASN:OD1	2:AB:204:ASP:N	2.39	0.56
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.21	0.56
4:AD:83:LYS:HD3	4:AD:84:GLY:N	2.20	0.56
22:BA:137:U:H2'	22:BA:140:C:C2	2.40	0.56
22:BA:511:U:O4	22:BA:512:G:N1	2.39	0.56
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.36	0.56
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.40	0.56
22:BA:2198:A:C2	29:BH:29:PHE:HB2	2.41	0.56
26:BE:18:THR:HA	26:BE:106:LYS:HG2	1.88	0.56
32:BK:7:MET:HE1	32:BK:44:LYS:HG2	1.88	0.56
1:CA:328:C:H4'	1:CA:329:A:H5"	1.88	0.56
8:CH:86:TYR:O	8:CH:87:LYS:HD2	2.05	0.56
11:CK:64:GLN:O	11:CK:68:GLU:HG3	2.06	0.56
22:DA:341:C:H2'	22:DA:342:A:C8	2.41	0.56
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.36	0.56
22:DA:2091:C:C3'	22:DA:2092:U:H5"	2.35	0.56
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.30	0.56
5:AE:136:VAL:HG22	5:AE:137:VAL:N	2.20	0.56
6:AF:16:GLU:OE2	4:CD:188:ARG:NH1	2.39	0.56
9:AI:57:MET:SD	9:AI:57:MET:N	2.78	0.56
11:AK:126:LYS:HA	21:AU:34:ARG:NH2	2.20	0.56
12:AL:3:THR:HG22	12:AL:4:VAL:N	2.21	0.56
13:AM:29:ARG:NH1	13:AM:63:PHE:HB2	2.20	0.56
16:AP:61:VAL:CG2	16:AP:67:ILE:HD11	2.36	0.56
22:BA:388:G:N7	22:BA:390:U:H2'	2.21	0.56
22:BA:714:U:O2'	22:BA:716:A:N7	2.39	0.56
22:BA:1198:U:H2'	22:BA:1199:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1678:A:C2'	22:BA:1679:A:H5'	2.36	0.56
22:BA:2192:U:C4	22:BA:2193:G:N7	2.74	0.56
22:BA:2345:G:C5	22:BA:2381:A:C2	2.94	0.56
22:BA:2800:A:H3'	22:BA:2801:G:C5'	2.35	0.56
27:BF:40:VAL:HG12	27:BF:85:ILE:C	2.31	0.56
29:BH:123:ARG:NH1	1:CA:367:U:OP2	2.39	0.56
43:BV:55:GLU:H	43:BV:55:GLU:CD	2.13	0.56
53:B5:125:GLY:O	53:B5:126:SER:CB	2.53	0.56
1:CA:411:A:C5	1:CA:429:U:C5	2.94	0.56
1:CA:519:C:OP2	12:CL:47:SER:OG	2.23	0.56
1:CA:1072:G:C5	1:CA:1073:U:C4	2.93	0.56
12:CL:29:GLN:O	12:CL:30:LYS:HG2	2.06	0.56
12:CL:74:LEU:HD21	12:CL:104:CYS:SG	2.46	0.56
17:CQ:52:GLU:HG2	17:CQ:53:CYS:H	1.71	0.56
22:DA:185:G:N1	22:DA:212:G:C2	2.73	0.56
22:DA:276:U:O2	22:DA:276:U:H2'	2.06	0.56
22:DA:457:A:N1	22:DA:470:A:H5"	2.21	0.56
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.88	0.56
22:DA:2250:G:O5'	22:DA:2250:G:H8	1.89	0.56
22:DA:2683:C:OP1	37:DP:56:HIS:HB3	2.05	0.56
22:DA:2843:G:N2	22:DA:2875:C:N3	2.54	0.56
28:DG:86:LYS:HB3	28:DG:165:ALA:HB3	1.86	0.56
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.88	0.56
42:DU:13:VAL:HG21	42:DU:39:ILE:CG2	2.36	0.56
47:DZ:52:SER:HA	47:DZ:55:VAL:HG22	1.88	0.56
1:AA:499:A:H4'	1:AA:500:G:OP1	2.06	0.55
1:AA:577:G:C8	1:AA:816:A:C6	2.94	0.55
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.35	0.55
1:AA:1264:U:O2	1:AA:1272:G:C2	2.59	0.55
2:AB:147:SER:O	2:AB:148:LEU:CB	2.54	0.55
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.87	0.55
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.20	0.55
12:AL:21:VAL:O	12:AL:21:VAL:HG13	2.06	0.55
16:AP:78:VAL:HG13	16:AP:78:VAL:O	2.04	0.55
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.05	0.55
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.23	0.55
35:BN:9:GLN:O	35:BN:11:ASN:N	2.39	0.55
36:BO:33:ARG:O	36:BO:33:ARG:HG2	2.06	0.55
46:BY:18:LEU:O	46:BY:22:LEU:CB	2.54	0.55
1:CA:170:U:O2'	1:CA:171:A:H5'	2.05	0.55
1:CA:1299:A:O2'	1:CA:1301:U:O4'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:19:GLY:O	11:CK:82:LEU:HA	2.06	0.55
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.36	0.55
22:DA:1515:A:O2'	22:DA:1556:C:O2'	2.18	0.55
22:DA:1833:C:C4	22:DA:1834:U:C4	2.94	0.55
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.06	0.55
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.74	0.55
1:AA:259:G:N2	1:AA:260:G:H1'	2.21	0.55
5:AE:144:LEU:O	5:AE:147:MET:HB3	2.06	0.55
7:AG:64:VAL:O	7:AG:68:ASN:ND2	2.39	0.55
22:BA:18:U:O3'	38:BQ:23:GLY:HA2	2.06	0.55
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.21	0.55
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.06	0.55
22:BA:1922:G:N3	22:BA:1922:G:H2'	2.21	0.55
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.41	0.55
38:BQ:19:LYS:O	38:BQ:22:LYS:HG3	2.06	0.55
50:B2:43:THR:O	50:B2:44:VAL:CG1	2.53	0.55
1:CA:121:U:H3'	1:CA:122:G:H5'	1.88	0.55
1:CA:457:G:N2	1:CA:476:U:C2	2.74	0.55
1:CA:642:A:C5	8:CH:107:SER:HA	2.41	0.55
1:CA:1288:A:N6	1:CA:1289:A:N6	2.55	0.55
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.22	0.55
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.05	0.55
4:CD:197:GLU:O	4:CD:201:VAL:HG23	2.06	0.55
11:CK:23:ILE:HD11	11:CK:86:VAL:HG13	1.88	0.55
20:CT:48:GLN:O	20:CT:52:ASN:ND2	2.39	0.55
22:DA:40:U:H2'	22:DA:41:C:C6	2.41	0.55
22:DA:247:G:N7	22:DA:249:C:C2	2.74	0.55
22:DA:571:U:C4	22:DA:575:A:C5	2.94	0.55
22:DA:600:G:C5	22:DA:601:C:C4	2.94	0.55
22:DA:1362:C:C2'	22:DA:1363:C:H5'	2.37	0.55
22:DA:2681:C:C2	22:DA:2724:U:O4	2.59	0.55
38:DQ:79:PHE:CZ	38:DQ:83:LEU:HD11	2.41	0.55
10:AJ:6:ILE:HD12	10:AJ:76:ILE:O	2.05	0.55
12:AL:43:LYS:O	12:AL:44:LYS:C	2.49	0.55
22:BA:70:G:H4'	22:BA:71:A:OP1	2.05	0.55
22:BA:1022:G:N2	22:BA:1142:A:C2	2.75	0.55
22:BA:1084:A:C5	22:BA:1085:A:C6	2.95	0.55
25:BD:104:VAL:HG23	25:BD:105:LYS:N	2.21	0.55
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.36	0.55
30:BI:79:LEU:HD22	30:BI:109:ILE:HG22	1.88	0.55
35:BN:103:ARG:HB2	35:BN:110:MET:HE3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.87	0.55
1:CA:32:A:H2'	1:CA:32:A:N3	2.20	0.55
1:CA:130:A:C2	1:CA:264:C:N1	2.73	0.55
1:CA:568:G:N2	1:CA:883:C:C2	2.75	0.55
1:CA:892:A:C5	1:CA:893:C:C5	2.95	0.55
1:CA:1361:G:H2'	1:CA:1362:A:H5"	1.87	0.55
4:CD:90:LEU:CD2	4:CD:200:ILE:HD11	2.37	0.55
8:CH:105:SER:O	8:CH:123:GLY:HA3	2.06	0.55
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.36	0.55
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.06	0.55
22:DA:2550:G:C6	22:DA:2551:C:C4	2.95	0.55
37:DP:106:LYS:HD2	37:DP:109:ARG:CZ	2.37	0.55
39:DR:49:ILE:CD1	39:DR:52:PRO:HA	2.36	0.55
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.88	0.55
2:AB:151:ILE:O	2:AB:152:LYS:C	2.50	0.55
5:AE:153:VAL:O	5:AE:156:LYS:HB2	2.05	0.55
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.88	0.55
16:AP:36:VAL:O	16:AP:36:VAL:HG13	2.06	0.55
19:AS:3:ARG:O	19:AS:4:SER:CB	2.53	0.55
22:BA:851:C:H2'	22:BA:852:U:C6	2.41	0.55
22:BA:894:U:H2'	22:BA:895:U:C6	2.41	0.55
22:BA:998:C:H3'	57:BA:3363:HOH:O	2.05	0.55
22:BA:1428:C:C5	22:BA:1569:A:C5'	2.89	0.55
22:BA:1926:U:H2'	22:BA:1926:U:O2	2.05	0.55
22:BA:2681:C:C2	22:BA:2724:U:O4	2.60	0.55
23:BB:116:G:H4'	36:BO:54:VAL:HG13	1.89	0.55
32:BK:40:LYS:NZ	32:BK:89:ASN:OD1	2.37	0.55
39:BR:14:VAL:HG13	39:BR:15:SER:N	2.21	0.55
43:BV:63:ILE:HD12	43:BV:72:VAL:HG21	1.88	0.55
4:CD:36:GLN:O	4:CD:37:ALA:HB2	2.07	0.55
8:CH:21:ASN:O	8:CH:22:LYS:C	2.49	0.55
22:DA:49:A:N6	22:DA:177:G:C4	2.74	0.55
22:DA:52:A:N7	22:DA:117:G:N2	2.54	0.55
22:DA:396:G:C1'	45:DX:29:PHE:HB3	2.36	0.55
22:DA:806:C:H2'	22:DA:807:U:C6	2.41	0.55
22:DA:1226:A:OP1	38:DQ:16:LYS:NZ	2.39	0.55
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.20	0.55
22:DA:1651:G:C6	22:DA:1652:A:C5	2.95	0.55
22:DA:2712:C:OP1	22:DA:2714:G:H4'	2.06	0.55
42:DU:4:LYS:O	42:DU:94:ARG:NH2	2.40	0.55
1:AA:152:A:N6	1:AA:170:U:C2	2.73	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1190:G:OP2	3:AC:5:VAL:HB	2.06	0.55
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.42	0.55
4:AD:152:GLN:O	4:AD:153:SER:C	2.49	0.55
22:BA:2310:C:H2'	22:BA:2311:A:H5'	1.88	0.55
22:BA:2502:G:C5'	22:BA:2503:A:H5"	2.37	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
1:CA:501:C:H1'	1:CA:549:C:H1'	1.88	0.55
1:CA:563:A:H2'	1:CA:567:G:C8	2.41	0.55
1:CA:692:U:H1'	1:CA:695:A:N7	2.21	0.55
1:CA:833:G:C5	1:CA:834:U:C5	2.95	0.55
1:CA:968:A:C8	1:CA:1062:U:H4'	2.41	0.55
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.42	0.55
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.05	0.55
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.07	0.55
4:CD:32:CYS:O	4:CD:33:LYS:HB3	2.06	0.55
10:CJ:15:HIS:CE1	10:CJ:16:ARG:HD3	2.42	0.55
21:CU:20:LYS:HZ2	21:CU:20:LYS:HA	1.72	0.55
22:DA:2297:A:N1	22:DA:2321:U:H5	2.04	0.55
1:AA:1418:A:C2	1:AA:1483:A:C2	2.94	0.55
8:AH:10:MET:O	8:AH:12:THR:N	2.40	0.55
16:AP:56:ARG:O	16:AP:59:HIS:N	2.39	0.55
17:AQ:52:GLU:N	17:AQ:52:GLU:CD	2.64	0.55
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.54	0.55
22:BA:1912:A:C2	22:BA:1919:A:C4	2.94	0.55
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.07	0.55
24:BC:15:HIS:O	24:BC:204:VAL:CG2	2.55	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.37	0.55
38:BQ:89:GLU:H	39:BR:49:ILE:CD1	2.18	0.55
38:BQ:109:LEU:HD11	39:BR:40:MET:CE	2.36	0.55
42:BU:72:ILE:HD12	42:BU:72:ILE:O	2.07	0.55
1:CA:154:U:C2	1:CA:168:G:N2	2.75	0.55
1:CA:184:G:N2	1:CA:185:U:C2	2.74	0.55
1:CA:455:G:N2	1:CA:478:A:C2	2.75	0.55
1:CA:829:G:C6	1:CA:858:G:N2	2.75	0.55
1:CA:1417:G:C6	1:CA:1482:G:C6	2.95	0.55
4:CD:179:GLU:HG3	4:CD:179:GLU:O	2.05	0.55
6:CF:97:THR:O	6:CF:98:GLU:CB	2.53	0.55
7:CG:83:SER:O	7:CG:85:TYR:N	2.40	0.55
8:CH:89:LYS:HG3	8:CH:90:ASP:N	2.21	0.55
22:DA:690:G:H1'	22:DA:779:U:O3'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.88	0.55
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.06	0.55
22:DA:1838:C:C6	22:DA:1899:A:C6	2.95	0.55
33:DL:92:LEU:HA	33:DL:125:LEU:HD11	1.89	0.55
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.89	0.55
1:AA:72:A:C2'	1:AA:73:C:H5'	2.37	0.55
1:AA:255:G:H4'	17:AQ:19:LYS:HD2	1.89	0.55
2:AB:119:THR:O	2:AB:120:GLN:CB	2.54	0.55
4:AD:124:MET:HE3	4:AD:146:ARG:HD2	1.88	0.55
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.87	0.55
22:BA:675:A:OP1	26:BE:58:LYS:NZ	2.35	0.55
22:BA:1169:A:N1	22:BA:1180:U:O4	2.39	0.55
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.42	0.55
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.06	0.55
36:BO:76:LYS:HE3	36:BO:80:GLU:OE2	2.07	0.55
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.42	0.55
1:CA:1206:G:C6	1:CA:1207:G:C5	2.95	0.55
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.31	0.55
5:CE:65:GLU:OE2	5:CE:69:ARG:NH2	2.40	0.55
12:CL:110:ARG:NH1	12:CL:112:GLN:O	2.40	0.55
22:DA:45:G:O3'	22:DA:46:G:O4'	2.25	0.55
22:DA:235:U:C4	22:DA:236:C:C5	2.94	0.55
22:DA:503:A:C2	22:DA:506:G:C4	2.95	0.55
22:DA:1109:C:H3'	22:DA:1110:G:C8	2.42	0.55
22:DA:1526:C:N4	22:DA:1527:G:C6	2.75	0.55
22:DA:1678:A:N7	22:DA:1679:A:N7	2.55	0.55
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.40	0.55
22:DA:2214:C:C2	22:DA:2215:C:C6	2.95	0.55
22:DA:2365:G:H4'	44:DW:60:PHE:CE2	2.41	0.55
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	2.07	0.55
22:DA:2533:U:OP1	22:DA:2665:A:O2'	2.22	0.55
22:DA:2796:U:C4	22:DA:2798:U:C4	2.94	0.55
24:DC:9:THR:O	24:DC:10:SER:OG	2.24	0.55
25:DD:105:LYS:O	25:DD:177:VAL:HG12	2.07	0.55
1:AA:338:A:N1	1:AA:351:G:O6	2.40	0.55
1:AA:919:A:O2'	1:AA:920:U:H5'	2.07	0.55
1:AA:1363:A:O2'	1:AA:1365:G:N7	2.36	0.55
4:AD:147:GLU:O	4:AD:148:LYS:C	2.49	0.55
8:AH:75:ILE:HD13	8:AH:129:VAL:HG22	1.89	0.55
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.06	0.55
21:AU:4:ILE:HA	21:AU:20:LYS:HE3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:18:U:OP1	38:BQ:30:ARG:NH2	2.39	0.55
22:BA:2191:A:C2	22:BA:2192:U:C4	2.93	0.55
24:BC:40:SER:C	24:BC:42:GLY:N	2.64	0.55
29:BH:86:ASP:CB	1:CA:359:G:O2'	2.51	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
1:CA:405:U:OP1	1:CA:406:G:O2'	2.21	0.55
1:CA:679:C:C2	1:CA:712:A:C2	2.95	0.55
2:CB:87:CYS:O	2:CB:89:GLN:N	2.39	0.55
4:CD:33:LYS:O	4:CD:33:LYS:HG2	2.05	0.55
22:DA:445:C:O2'	22:DA:449:A:N3	2.38	0.55
22:DA:1027:A:N7	22:DA:1126:A:C2	2.75	0.55
22:DA:1208:C:C4	22:DA:1209:U:C5	2.95	0.55
22:DA:1530:G:C2	22:DA:1542:U:O2	2.60	0.55
22:DA:2019:A:H4'	38:DQ:34:VAL:HG21	1.88	0.55
26:DE:52:VAL:HG21	26:DE:81:GLY:CA	2.35	0.55
40:DS:46:LEU:O	40:DS:50:VAL:HG23	2.07	0.55
1:AA:254:G:OP1	17:AQ:70:THR:CB	2.55	0.55
1:AA:382:A:C2	1:AA:383:A:C4	2.94	0.55
1:AA:760:G:N7	1:AA:761:G:C8	2.75	0.55
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.40	0.55
11:AK:51:GLY:O	11:AK:52:PHE:O	2.25	0.55
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.49	0.55
19:AS:44:MET:HE2	19:AS:49:ILE:HD11	1.88	0.55
22:BA:861:A:C2	22:BA:917:A:C4	2.95	0.55
22:BA:1422:G:C4	22:BA:1423:G:C8	2.95	0.55
24:BC:78:VAL:HG21	24:BC:110:LEU:CD2	2.36	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
1:CA:686:U:O2	1:CA:687:A:C8	2.59	0.55
12:CL:44:LYS:HB2	12:CL:45:PRO:HD3	1.89	0.55
22:DA:488:G:H2'	22:DA:489:G:H2'	1.89	0.55
22:DA:753:A:H2'	22:DA:754:U:C6	2.42	0.55
22:DA:847:U:O2	22:DA:847:U:H2'	2.06	0.55
22:DA:1532:A:C2	22:DA:1540:G:C6	2.95	0.55
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.39	0.55
24:DC:68:LYS:HD3	24:DC:149:GLY:O	2.07	0.55
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.55
35:DN:1:MET:N	35:DN:1:MET:CE	2.70	0.55
1:AA:844:G:N2	1:AA:846:G:H4'	2.21	0.55
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.07	0.55
4:AD:147:GLU:HA	4:AD:150:LYS:CD	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:40:GLU:HA	7:AG:43:VAL:HG23	1.89	0.55
13:AM:40:ALA:HB3	13:AM:43:VAL:HG13	1.89	0.55
17:AQ:17:MET:O	17:AQ:19:LYS:N	2.40	0.55
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.54	0.55
22:BA:735:A:H3'	22:BA:736:C:H6	1.72	0.55
22:BA:1022:G:O6	31:BJ:68:LYS:NZ	2.39	0.55
22:BA:1022:G:C5	22:BA:1140:C:C4	2.95	0.55
22:BA:1094:U:N3	22:BA:1097:U:OP2	2.39	0.55
22:BA:1509:A:HO2'	22:BA:1510:G:P	2.28	0.55
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.25	0.55
23:BB:90:C:C2'	23:BB:91:C:O5'	2.55	0.55
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.55
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.36	0.55
33:BL:29:LYS:HG2	33:BL:30:THR:N	2.22	0.55
36:BO:33:ARG:O	36:BO:33:ARG:CG	2.55	0.55
45:BX:7:VAL:HG23	45:BX:51:VAL:HG12	1.89	0.55
1:CA:66:A:H4'	1:CA:173:U:C5	2.42	0.55
1:CA:130:A:C2	1:CA:264:C:C6	2.95	0.55
1:CA:313:A:H2'	1:CA:314:C:C6	2.41	0.55
1:CA:324:G:N2	1:CA:327:A:C8	2.75	0.55
6:CF:8:PHE:CE1	6:CF:60:VAL:HB	2.42	0.55
11:CK:127:ARG:HB2	21:CU:34:ARG:NH1	2.22	0.55
22:DA:308:G:C8	22:DA:501:A:H1'	2.42	0.55
22:DA:449:A:N7	57:DA:3243:HOH:O	2.33	0.55
22:DA:2111:U:OP1	22:DA:2118:U:O2'	2.24	0.55
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.42	0.55
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.88	0.55
23:DB:39:A:H2'	23:DB:40:U:C6	2.41	0.55
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.22	0.55
32:DK:118:LEU:HD23	32:DK:118:LEU:N	2.22	0.55
36:DO:22:GLY:O	36:DO:42:PRO:HB3	2.07	0.55
1:AA:126:G:H2'	1:AA:127:G:O4'	2.05	0.54
1:AA:268:U:H2'	1:AA:269:C:C6	2.42	0.54
1:AA:1002:G:C2	1:AA:1003:G:H1'	2.42	0.54
1:AA:1407:C:O2'	22:BA:1912:A:N6	2.40	0.54
2:AB:16:PHE:O	2:AB:41:ILE:HD12	2.07	0.54
11:AK:125:LYS:HG2	11:AK:126:LYS:N	2.22	0.54
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.07	0.54
22:BA:465:G:H2'	22:BA:466:A:C8	2.42	0.54
22:BA:839:U:H2'	22:BA:840:C:C6	2.41	0.54
22:BA:1343:G:C4	22:BA:1344:U:C5	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1394:U:H2'	22:BA:1395:A:O4'	2.06	0.54
22:BA:1925:C:C5'	22:BA:1926:U:O4	2.55	0.54
22:BA:1934:C:H4'	22:BA:1974:C:O3'	2.07	0.54
22:BA:2187:U:C5	22:BA:2188:U:C4	2.95	0.54
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.07	0.54
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	2.07	0.54
27:BF:33:LYS:O	27:BF:33:LYS:HG3	2.07	0.54
28:BG:11:VAL:CG2	28:BG:11:VAL:O	2.56	0.54
1:CA:106:C:O2	1:CA:379:C:H5'	2.07	0.54
1:CA:861:G:N7	1:CA:862:C:C5	2.75	0.54
2:CB:103:ASN:CG	2:CB:103:ASN:O	2.48	0.54
4:CD:35:GLU:O	4:CD:38:PRO:HD3	2.06	0.54
5:CE:109:GLY:O	5:CE:110:ALA:HB3	2.07	0.54
5:CE:122:ASN:O	5:CE:123:VAL:O	2.25	0.54
10:CJ:81:GLU:HA	10:CJ:84:VAL:HG12	1.89	0.54
11:CK:84:VAL:HG11	11:CK:97:ILE:HG22	1.89	0.54
16:CP:19:VAL:HG12	16:CP:37:GLY:C	2.31	0.54
19:CS:75:ALA:N	19:CS:76:PRO:CD	2.69	0.54
22:DA:2200:C:O2	22:DA:2226:C:N4	2.40	0.54
22:DA:2519:U:C6	22:DA:2542:A:N6	2.75	0.54
24:DC:160:THR:HG23	24:DC:177:ARG:HG2	1.88	0.54
44:DW:21:LEU:HA	44:DW:39:ARG:HB2	1.89	0.54
1:AA:194:C:O2'	1:AA:195:A:H5'	2.06	0.54
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.08	0.54
1:AA:1160:G:O6	1:AA:1181:G:C6	2.61	0.54
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.23	0.54
4:AD:125:VAL:O	4:AD:127:GLY:N	2.32	0.54
9:AI:115:LYS:O	9:AI:116:VAL:C	2.50	0.54
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.06	0.54
14:AN:75:ARG:O	14:AN:76:LYS:C	2.51	0.54
22:BA:1316:U:C2	22:BA:1337:G:N2	2.76	0.54
22:BA:1439:A:C2	22:BA:1553:A:C5	2.95	0.54
22:BA:2128:G:H5'	53:B5:36:ALA:HA	1.88	0.54
22:BA:2258:C:O2'	22:BA:2427:C:OP2	2.21	0.54
22:BA:2271:G:OP1	44:BW:19:LYS:O	2.25	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.89	0.54
44:BW:52:GLY:HA3	44:BW:60:PHE:CE1	2.42	0.54
46:BY:49:ASP:O	46:BY:52:ARG:N	2.39	0.54
46:BY:54:LYS:O	46:BY:58:ASN:HB2	2.07	0.54
1:CA:38:G:N2	1:CA:397:A:C4	2.76	0.54
1:CA:247:G:C6	1:CA:278:G:N1	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:790:A:H2'	1:CA:791:G:C8	2.43	0.54
1:CA:818:G:O2'	1:CA:819:A:H5'	2.06	0.54
1:CA:976:G:N2	1:CA:1363:A:N3	2.55	0.54
1:CA:1361:G:C2'	1:CA:1362:A:H5"	2.36	0.54
1:CA:1379:G:N7	7:CG:2:PRO:HB2	2.22	0.54
13:CM:72:GLU:O	13:CM:76:SER:OG	2.24	0.54
21:CU:36:GLU:OE1	21:CU:36:GLU:HA	2.05	0.54
22:DA:152:A:C2	22:DA:175:G:C2	2.95	0.54
22:DA:682:G:N3	22:DA:682:G:H2'	2.21	0.54
22:DA:1127:A:H2'	22:DA:1128:G:H5"	1.88	0.54
22:DA:1582:C:O2'	22:DA:1585:C:N3	2.32	0.54
22:DA:2511:U:C4	22:DA:2512:C:C5	2.96	0.54
22:DA:2684:U:O4'	32:DK:70:ARG:NH1	2.40	0.54
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.07	0.54
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.07	0.54
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.89	0.54
1:AA:197:A:N3	1:AA:198:G:H1'	2.22	0.54
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.89	0.54
1:AA:803:G:C6	1:AA:804:U:C4	2.96	0.54
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.72	0.54
2:AB:154:MET:CE	2:AB:158:PRO:HG3	2.37	0.54
13:AM:6:GLY:C	13:AM:8:ASN:N	2.61	0.54
15:AO:24:SER:O	15:AO:25:THR:C	2.49	0.54
22:BA:1754:A:N6	22:BA:1755:A:C6	2.76	0.54
22:BA:1912:A:C8	22:BA:1917:U:O4	2.60	0.54
22:BA:1916:A:H2'	22:BA:1917:U:C1'	2.38	0.54
33:BL:62:PRO:HG2	51:B3:25:LYS:HD3	1.90	0.54
1:CA:31:G:N7	1:CA:306:A:H1'	2.22	0.54
1:CA:509:A:P	57:CA:1758:HOH:O	2.64	0.54
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.07	0.54
1:CA:1521:C:N3	1:CA:1522:U:C5	2.75	0.54
2:CB:91:PHE:CD1	2:CB:150:GLY:HA3	2.42	0.54
2:CB:169:GLU:O	2:CB:171:ILE:N	2.40	0.54
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.89	0.54
16:CP:67:ILE:HG23	16:CP:71:VAL:CG1	2.38	0.54
21:CU:10:GLU:N	21:CU:12:PHE:CE2	2.75	0.54
22:DA:186:G:C2	22:DA:211:C:C2	2.96	0.54
22:DA:204:A:H5'	22:DA:206:U:O4'	2.07	0.54
22:DA:858:G:O2'	22:DA:2268:A:N3	2.37	0.54
22:DA:1032:A:H4'	52:D4:16:ILE:HD12	1.88	0.54
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2824:C:C4	22:DA:2825:G:C5	2.95	0.54
24:DC:17:VAL:HG23	24:DC:204:VAL:CG2	2.37	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
39:DR:80:ARG:C	39:DR:82:HIS:H	2.15	0.54
41:DT:72:GLN:O	41:DT:73:ARG:C	2.51	0.54
42:DU:74:ASN:HA	42:DU:96:PHE:CZ	2.42	0.54
1:AA:51:A:C2	1:AA:353:A:N1	2.75	0.54
1:AA:90:C:C2	1:AA:91:U:C6	2.96	0.54
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.07	0.54
3:AC:167:TRP:HE3	3:AC:167:TRP:C	2.15	0.54
11:AK:76:GLU:HA	22:BA:2141:G:P	2.48	0.54
22:BA:96:C:H4'	46:BY:41:HIS:CD2	2.42	0.54
22:BA:956:G:OP2	34:BM:86:LYS:HE2	2.07	0.54
22:BA:1125:G:C6	22:BA:1126:A:N6	2.75	0.54
28:BG:84:THR:OG1	28:BG:134:LYS:HG2	2.08	0.54
33:BL:68:SER:O	33:BL:69:ARG:CB	2.56	0.54
1:CA:109:A:C6	1:CA:327:A:C6	2.95	0.54
1:CA:483:C:H2'	1:CA:484:G:C8	2.42	0.54
1:CA:1077:G:N1	1:CA:1081:A:C6	2.76	0.54
2:CB:99:GLY:HA2	2:CB:102:THR:HG22	1.90	0.54
6:CF:16:GLU:O	6:CF:18:VAL:N	2.40	0.54
9:CI:28:ILE:HB	9:CI:35:LEU:HB2	1.87	0.54
22:DA:475:C:N3	22:DA:481:G:C6	2.76	0.54
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.22	0.54
22:DA:1213:A:O2'	22:DA:1239:G:O4'	2.24	0.54
22:DA:1321:A:N6	22:DA:1322:A:C2	2.76	0.54
22:DA:1581:G:C5	22:DA:1582:C:C4	2.96	0.54
22:DA:1681:G:O2'	22:DA:1762:A:N3	2.36	0.54
22:DA:1835:G:C5	22:DA:1836:C:C5	2.96	0.54
22:DA:2415:G:C6	22:DA:2416:C:N3	2.75	0.54
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	1.88	0.54
35:DN:58:ASP:OD2	35:DN:63:ARG:NH2	2.41	0.54
46:DY:28:LEU:HD22	46:DY:37:LEU:HD11	1.89	0.54
1:AA:82:G:O6	1:AA:87:C:N4	2.40	0.54
1:AA:125:U:O2'	1:AA:126:G:H5'	2.07	0.54
1:AA:591:U:OP2	8:AH:31:LYS:HD2	2.07	0.54
22:BA:45:G:C5'	22:BA:46:G:OP1	2.55	0.54
22:BA:877:A:C6	22:BA:899:A:C6	2.96	0.54
22:BA:1379:U:OP1	22:BA:1379:U:C5	2.61	0.54
22:BA:1570:A:C6	22:BA:1571:A:C6	2.95	0.54
22:BA:1588:G:C2	22:BA:1589:U:C6	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2033:A:P	57:BA:3479:HOH:O	2.56	0.54
29:BH:77:THR:O	29:BH:77:THR:CG2	2.56	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54
30:BI:86:ILE:N	30:BI:86:ILE:HD12	2.23	0.54
48:B0:27:SER:O	48:B0:28:LEU:C	2.50	0.54
1:CA:104:G:C2	1:CA:105:G:C8	2.95	0.54
1:CA:577:G:C2	1:CA:578:C:C5	2.95	0.54
1:CA:690:G:H2'	1:CA:691:G:O4'	2.08	0.54
1:CA:970:C:OP1	10:CJ:59:LYS:NZ	2.40	0.54
1:CA:1022:A:C6	1:CA:1023:U:C4	2.95	0.54
1:CA:1160:G:O2'	1:CA:1161:C:P	2.66	0.54
6:CF:37:HIS:O	6:CF:38:ARG:HB3	2.08	0.54
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.72	0.54
12:CL:102:LEU:N	12:CL:102:LEU:HD12	2.22	0.54
14:CN:21:PHE:CD2	14:CN:25:ALA:HB2	2.42	0.54
22:DA:875:G:N2	22:DA:903:C:C2	2.76	0.54
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.43	0.54
22:DA:2134:A:C2	22:DA:2135:A:C8	2.96	0.54
22:DA:2134:A:N6	22:DA:2157:G:O2'	2.38	0.54
22:DA:2266:A:C2	22:DA:2272:U:C5	2.95	0.54
22:DA:2314:A:C2	22:DA:2315:G:C4	2.95	0.54
41:DT:37:ASP:OD1	41:DT:38:ALA:N	2.35	0.54
1:AA:450:G:C8	1:AA:481:G:O6	2.60	0.54
1:AA:503:C:OP1	57:AA:1881:HOH:O	2.18	0.54
4:AD:171:LEU:HD12	4:AD:171:LEU:O	2.07	0.54
10:AJ:19:ASP:OD1	10:AJ:19:ASP:N	2.41	0.54
22:BA:645:C:O2'	22:BA:646:U:H5"	2.08	0.54
24:BC:107:PRO:HB3	24:BC:142:HIS:HE1	1.73	0.54
26:BE:149:ILE:C	26:BE:149:ILE:HD12	2.32	0.54
32:BK:86:LEU:N	32:BK:86:LEU:HD23	2.22	0.54
48:B0:54:VAL:O	48:B0:56:ALA:N	2.40	0.54
1:CA:15:G:O4'	5:CE:29:ARG:NH2	2.40	0.54
1:CA:263:A:OP1	20:CT:74:ARG:NH1	2.40	0.54
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.91	0.54
1:CA:1072:G:OP1	5:CE:62:LYS:NZ	2.40	0.54
1:CA:1077:G:N2	1:CA:1081:A:C4	2.75	0.54
1:CA:1244:G:C6	1:CA:1245:C:N4	2.76	0.54
17:CQ:49:GLU:O	17:CQ:50:ASN:CG	2.50	0.54
22:DA:192:C:C5	22:DA:193:U:C2	2.96	0.54
22:DA:847:U:O2	22:DA:934:U:H1'	2.07	0.54
22:DA:1109:C:H5"	22:DA:1110:G:OP2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2094:A:H4'	29:DH:25:TYR:CZ	2.43	0.54
22:DA:2107:G:C2	22:DA:2183:A:C2	2.96	0.54
22:DA:2345:G:C5	22:DA:2381:A:C2	2.95	0.54
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.88	0.54
51:D3:34:THR:HG22	51:D3:35:LYS:N	2.21	0.54
5:AE:90:THR:HG22	5:AE:91:GLY:H	1.72	0.54
11:AK:74:VAL:C	11:AK:76:GLU:N	2.62	0.54
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.07	0.54
22:BA:244:A:C2	22:BA:255:A:C4	2.96	0.54
22:BA:570:G:H2'	22:BA:2030:A:C8	2.43	0.54
22:BA:1414:C:C4	22:BA:1415:U:H5	2.25	0.54
22:BA:1912:A:C2	22:BA:1919:A:C5	2.96	0.54
24:BC:225:MET:CE	24:BC:230:HIS:HB2	2.36	0.54
30:BI:124:ALA:O	30:BI:127:ARG:HG2	2.08	0.54
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.88	0.54
2:CB:139:ARG:HD2	2:CB:139:ARG:C	2.33	0.54
21:CU:9:ASN:N	21:CU:12:PHE:HE2	2.06	0.54
22:DA:136:G:N2	22:DA:144:A:C5	2.76	0.54
22:DA:189:G:P	45:DX:26:LYS:HE2	2.48	0.54
22:DA:1651:G:N2	22:DA:2007:U:C2	2.76	0.54
22:DA:1844:C:H5'	24:DC:254:GLY:O	2.08	0.54
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.43	0.54
28:DG:129:THR:C	28:DG:130:GLU:HG2	2.31	0.54
28:DG:158:LYS:O	28:DG:160:LYS:N	2.40	0.54
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.06	0.54
1:AA:596:A:C5	1:AA:645:G:C2	2.96	0.54
1:AA:663:A:H5'	1:AA:836:G:OP1	2.08	0.54
8:AH:54:ASP:OD1	8:AH:55:THR:N	2.39	0.54
8:AH:105:SER:O	8:AH:123:GLY:HA3	2.07	0.54
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.90	0.54
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG12	1.90	0.54
14:AN:3:LYS:O	14:AN:4:GLN:C	2.50	0.54
14:AN:46:LEU:O	14:AN:47:LYS:C	2.50	0.54
17:AQ:68:SER:O	17:AQ:70:THR:N	2.41	0.54
22:BA:64:A:H2'	22:BA:65:U:C6	2.43	0.54
22:BA:622:G:OP2	57:BA:3291:HOH:O	2.18	0.54
22:BA:1299:G:O2'	22:BA:1301:A:C5	2.60	0.54
22:BA:2012:G:OP1	40:BS:98:LYS:NZ	2.39	0.54
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.43	0.54
22:BA:2479:U:OP1	22:BA:2537:U:H1'	2.07	0.54
23:BB:50:A:OP1	36:BO:68:LYS:HE2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.88	0.54
28:BG:89:LEU:N	28:BG:89:LEU:CD1	2.71	0.54
42:BU:95:PHE:CD1	42:BU:95:PHE:C	2.85	0.54
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.71	0.54
49:B1:17:THR:CG2	49:B1:42:VAL:HB	2.36	0.54
1:CA:246:A:N3	1:CA:279:A:N6	2.55	0.54
1:CA:328:C:O2	1:CA:328:C:C2'	2.55	0.54
1:CA:983:A:OP1	14:CN:9:ARG:NH2	2.41	0.54
1:CA:992:U:O4'	1:CA:993:G:N2	2.41	0.54
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.43	0.54
3:CC:16:LYS:NZ	3:CC:181:ASP:OD1	2.40	0.54
5:CE:116:GLU:HG3	5:CE:117:VAL:N	2.23	0.54
8:CH:96:MET:HB2	8:CH:99:LEU:O	2.08	0.54
17:CQ:15:ASP:HA	17:CQ:21:ILE:HD12	1.90	0.54
18:CR:25:ASP:O	18:CR:26:ILE:C	2.51	0.54
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.43	0.54
22:DA:396:G:O4'	45:DX:29:PHE:HB3	2.07	0.54
22:DA:547:A:N7	22:DA:548:G:N3	2.56	0.54
22:DA:627:A:C6	22:DA:637:A:C8	2.95	0.54
22:DA:830:G:C4	22:DA:2448:A:C5	2.96	0.54
22:DA:1304:A:C5	22:DA:1305:C:C5	2.96	0.54
22:DA:1371:G:N7	57:DA:3396:HOH:O	2.34	0.54
22:DA:1428:C:C4	22:DA:1569:A:H5"	2.43	0.54
22:DA:2037:A:C6	22:DA:2038:G:C6	2.96	0.54
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.06	0.54
22:DA:2127:G:H4'	22:DA:2128:G:OP1	2.08	0.54
24:DC:160:THR:CG2	24:DC:177:ARG:HG2	2.38	0.54
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.54
40:DS:37:THR:OG1	40:DS:48:LYS:NZ	2.41	0.54
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.22	0.54
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.23	0.54
1:AA:340:U:H2'	1:AA:341:C:C6	2.43	0.54
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.41	0.54
10:AJ:52:LEU:HD22	10:AJ:62:ARG:HG2	1.89	0.54
10:AJ:67:ILE:O	10:AJ:67:ILE:HG22	2.08	0.54
22:BA:571:U:C4	22:BA:575:A:C5	2.96	0.54
22:BA:1008:A:N6	22:BA:1136:G:C6	2.76	0.54
22:BA:1098:A:C5	22:BA:1099:G:C6	2.95	0.54
22:BA:1436:G:N2	22:BA:1557:C:C2	2.75	0.54
22:BA:2309:A:N6	22:BA:2310:C:N4	2.56	0.54
23:BB:78:A:C2	23:BB:99:A:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.07	0.54
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.22	0.54
1:CA:597:G:C8	1:CA:598:U:C5	2.95	0.54
1:CA:879:C:C2'	1:CA:880:C:O5'	2.56	0.54
1:CA:919:A:C2	1:CA:920:U:C5	2.96	0.54
1:CA:1053:G:N7	1:CA:1200:C:H5"	2.23	0.54
6:CF:38:ARG:NH2	6:CF:98:GLU:O	2.40	0.54
22:DA:489:G:HO2'	22:DA:491:G:H8	1.56	0.54
22:DA:560:C:O2	38:DQ:48:ARG:NH1	2.40	0.54
22:DA:844:A:C2	22:DA:845:A:N7	2.76	0.54
22:DA:1344:U:O2'	22:DA:1345:C:P	2.65	0.54
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.08	0.54
22:DA:2457:U:C4	22:DA:2458:G:C6	2.96	0.54
22:DA:2868:A:C6	22:DA:2869:G:C6	2.95	0.54
23:DB:29:A:H2'	23:DB:30:C:C6	2.43	0.54
40:DS:67:ASP:OD1	40:DS:67:ASP:N	2.41	0.54
1:AA:33:A:H2'	1:AA:34:C:C6	2.43	0.54
1:AA:92:U:H2'	1:AA:93:U:C6	2.43	0.54
1:AA:96:U:O2'	1:AA:97:G:O5'	2.23	0.54
1:AA:100:G:N7	1:AA:101:A:N7	2.55	0.54
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.73	0.54
2:AB:21:ARG:C	2:AB:23:TRP:N	2.64	0.54
11:AK:23:ILE:HG22	11:AK:32:VAL:HG22	1.90	0.54
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.56	0.54
22:BA:826:U:O2'	33:BL:53:GLY:HA3	2.07	0.54
22:BA:1925:C:H4'	22:BA:1926:U:C5	2.42	0.54
24:BC:21:ASN:C	24:BC:21:ASN:OD1	2.50	0.54
25:BD:104:VAL:O	25:BD:105:LYS:CB	2.55	0.54
33:BL:115:GLU:N	33:BL:115:GLU:OE2	2.41	0.54
37:BP:53:ARG:O	37:BP:54:GLY:C	2.50	0.54
40:BS:37:THR:HG22	40:BS:38:TYR:CE1	2.42	0.54
53:B5:50:ILE:CG2	53:B5:51:ASP:N	2.70	0.54
1:CA:72:A:C6	1:CA:73:C:N4	2.77	0.54
1:CA:252:U:O4	1:CA:253:A:N6	2.40	0.54
1:CA:859:G:O6	1:CA:869:G:O2'	2.25	0.54
1:CA:978:A:P	1:CA:1362:A:N6	2.81	0.54
2:CB:64:LYS:HD3	2:CB:64:LYS:C	2.33	0.54
5:CE:83:HIS:CE1	8:CH:96:MET:HE3	2.43	0.54
22:DA:753:A:C2	22:DA:754:U:C2	2.96	0.54
22:DA:1323:C:C5	22:DA:1324:G:N7	2.76	0.54
22:DA:1912:A:OP2	22:DA:1918:A:N6	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:57:A:C2	27:DF:26:MET:SD	3.00	0.54
23:DB:100:G:H2'	23:DB:101:A:O4'	2.08	0.54
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.22	0.54
28:DG:118:PRO:O	28:DG:119:ALA:C	2.51	0.54
31:DJ:125:TYR:HH	31:DJ:132:HIS:CE1	2.26	0.54
36:DO:80:GLU:HA	36:DO:83:LEU:HD12	1.90	0.54
37:DP:53:ARG:N	37:DP:57:SER:OG	2.40	0.54
51:D3:34:THR:CG2	51:D3:35:LYS:N	2.70	0.54
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.07	0.53
4:AD:157:ALA:O	4:AD:160:GLU:HB3	2.08	0.53
22:BA:2284:A:OP1	49:B1:4:GLY:O	2.25	0.53
22:BA:2345:G:C5	22:BA:2347:C:C5	2.96	0.53
22:BA:2587:A:OP1	57:BA:3547:HOH:O	2.18	0.53
26:BE:189:THR:O	26:BE:192:ALA:N	2.41	0.53
36:BO:101:GLY:O	36:BO:102:ARG:C	2.51	0.53
37:BP:22:PRO:HA	37:BP:47:VAL:HG12	1.89	0.53
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.41	0.53
39:BR:14:VAL:HG21	39:BR:20:VAL:HG21	1.89	0.53
1:CA:757:U:OP1	1:CA:822:U:O2'	2.22	0.53
1:CA:803:G:C6	1:CA:804:U:N3	2.76	0.53
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.07	0.53
1:CA:1269:A:C2	1:CA:1313:U:O4'	2.61	0.53
12:CL:110:ARG:NE	12:CL:117:TYR:CD2	2.76	0.53
17:CQ:12:VAL:HG21	17:CQ:54:GLY:O	2.08	0.53
19:CS:29:LYS:CB	19:CS:30:PRO:HD2	2.38	0.53
21:CU:51:SER:O	21:CU:52:ALA:C	2.50	0.53
22:DA:249:C:O5'	22:DA:2394:C:O2'	2.26	0.53
22:DA:389:G:C8	22:DA:2413:G:H4'	2.43	0.53
22:DA:497:A:H2'	22:DA:498:G:O4'	2.07	0.53
22:DA:1027:A:C6	22:DA:1126:A:C4	2.96	0.53
22:DA:1171:G:N2	22:DA:1178:C:O2	2.40	0.53
22:DA:1383:A:C2	22:DA:1384:A:C5	2.96	0.53
22:DA:1623:G:C6	22:DA:1624:U:C5	2.96	0.53
22:DA:2658:C:OP1	28:DG:158:LYS:NZ	2.40	0.53
49:D1:4:GLY:O	49:D1:6:ARG:N	2.41	0.53
1:AA:76:G:H2'	1:AA:76:G:N3	2.22	0.53
1:AA:142:G:H2'	1:AA:142:G:N3	2.22	0.53
1:AA:202:G:C2	1:AA:216:U:O2	2.61	0.53
1:AA:411:A:C6	1:AA:429:U:C5	2.95	0.53
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.42	0.53
1:AA:1320:C:O2	19:AS:36:ARG:NH1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1342:C:O2'	9:AI:126:GLN:HG3	2.08	0.53
4:AD:188:ARG:O	4:AD:190:ASP:O	2.26	0.53
5:AE:94:VAL:CG2	5:AE:111:MET:HE1	2.38	0.53
8:AH:105:SER:HB2	8:AH:126:ILE:HD11	1.89	0.53
11:AK:71:ALA:O	11:AK:73:ALA:N	2.42	0.53
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.90	0.53
15:AO:2:SER:O	15:AO:3:LEU:CB	2.55	0.53
22:BA:229:C:N3	22:BA:230:G:H1'	2.24	0.53
22:BA:332:A:C2	22:BA:335:C:C5	2.96	0.53
22:BA:1268:A:C2	22:BA:2013:A:C4	2.96	0.53
22:BA:1269:A:H2'	22:BA:1270:C:C6	2.43	0.53
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.09	0.53
26:BE:193:VAL:O	26:BE:197:GLU:HB2	2.08	0.53
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.71	0.53
28:BG:118:PRO:O	28:BG:119:ALA:C	2.51	0.53
32:BK:34:GLY:O	32:BK:35:VAL:C	2.50	0.53
39:BR:25:LEU:H	39:BR:94:THR:HG23	1.73	0.53
43:BV:56:PHE:O	43:BV:61:LEU:HD11	2.08	0.53
1:CA:19:A:C2	1:CA:20:U:C2	2.97	0.53
1:CA:211:G:N3	1:CA:211:G:H2'	2.24	0.53
1:CA:862:C:C2	1:CA:863:U:C6	2.96	0.53
1:CA:1082:A:C6	1:CA:1083:U:N3	2.77	0.53
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.22	0.53
2:CB:62:SER:C	2:CB:64:LYS:N	2.63	0.53
4:CD:48:LEU:HD23	4:CD:53:VAL:N	2.24	0.53
22:DA:1407:G:N2	22:DA:1596:A:C4	2.76	0.53
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.22	0.53
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.24	0.53
22:DA:2094:A:C5'	29:DH:25:TYR:CD2	2.91	0.53
22:DA:2615:U:C4	48:D0:3:VAL:O	2.61	0.53
22:DA:2693:G:N2	22:DA:2717:C:C2	2.76	0.53
25:DD:13:ARG:HD2	25:DD:15:PHE:CE2	2.43	0.53
33:DL:68:SER:O	33:DL:69:ARG:CB	2.56	0.53
50:D2:15:SER:O	50:D2:16:HIS:ND1	2.41	0.53
1:AA:686:U:O4	1:AA:703:G:O2'	2.21	0.53
1:AA:1059:C:C4	1:AA:1060:U:C5	2.96	0.53
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.08	0.53
4:AD:29:ASP:C	4:AD:30:THR:O	2.42	0.53
6:AF:85:ILE:O	6:AF:86:ARG:HG2	2.08	0.53
8:AH:51:VAL:O	8:AH:51:VAL:CG2	2.56	0.53
12:AL:23:ALA:O	12:AL:24:LEU:O	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:19:VAL:CG1	16:AP:37:GLY:C	2.82	0.53
17:AQ:48:ASP:OD2	17:AQ:52:GLU:OE1	2.27	0.53
19:AS:5:LEU:C	19:AS:6:LYS:HG3	2.32	0.53
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.22	0.53
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	1.90	0.53
21:AU:12:PHE:N	21:AU:12:PHE:HD1	2.05	0.53
22:BA:753:A:OP1	50:B2:1:MET:HE3	2.08	0.53
22:BA:815:C:O2'	22:BA:816:C:H5'	2.08	0.53
22:BA:998:C:OP2	38:BQ:58:ARG:NH2	2.36	0.53
22:BA:1203:U:H1'	33:BL:4:ASN:HB3	1.90	0.53
22:BA:1439:A:P	57:BA:3638:HOH:O	2.53	0.53
22:BA:2444:G:OP2	26:BE:63:LYS:HD3	2.08	0.53
27:BF:171:ALA:O	27:BF:174:ASP:N	2.41	0.53
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.23	0.53
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.72	0.53
1:CA:624:C:H2'	1:CA:625:U:O4'	2.08	0.53
1:CA:1138:G:C2	1:CA:1140:C:C4	2.96	0.53
1:CA:1191:A:H5"	3:CC:4:LYS:HE3	1.89	0.53
1:CA:1511:G:C5	1:CA:1512:U:C5	2.96	0.53
7:CG:90:GLU:OE1	7:CG:90:GLU:N	2.41	0.53
20:CT:3:ASN:O	20:CT:5:LYS:N	2.41	0.53
22:DA:333:G:C5	22:DA:334:C:C5	2.97	0.53
22:DA:350:G:C2	22:DA:351:C:C2	2.96	0.53
22:DA:466:A:C2	22:DA:796:C:O4'	2.61	0.53
22:DA:619:G:O6	26:DE:98:LYS:NZ	2.31	0.53
22:DA:811:U:O2	22:DA:1251:C:C5	2.62	0.53
22:DA:1087:G:N1	22:DA:1089:A:C2	2.76	0.53
22:DA:1805:A:N3	22:DA:1813:G:C2	2.76	0.53
22:DA:1838:C:C5	22:DA:1899:A:C5	2.96	0.53
22:DA:1885:A:C6	22:DA:1886:U:C2	2.96	0.53
22:DA:2204:G:C5	22:DA:2221:G:C2	2.96	0.53
1:AA:102:G:N3	1:AA:103:U:C6	2.76	0.53
1:AA:199:A:C2	1:AA:200:G:C4	2.96	0.53
1:AA:408:A:OP1	4:AD:110:THR:HG21	2.08	0.53
1:AA:452:A:C8	1:AA:453:G:C8	2.96	0.53
1:AA:667:G:OP1	1:AA:732:C:O2'	2.13	0.53
1:AA:1350:A:C5	1:AA:1351:U:C4	2.97	0.53
2:AB:219:ALA:HA	2:AB:222:ARG:NH2	2.22	0.53
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.36	0.53
4:AD:68:LEU:HD22	4:AD:68:LEU:N	2.23	0.53
4:AD:109:ALA:N	4:AD:113:GLU:OE2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:165:ARG:O	4:AD:166:GLU:C	2.51	0.53
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.39	0.53
11:AK:34:ILE:HG12	11:AK:70:CYS:SG	2.49	0.53
21:AU:22:SER:C	21:AU:23:CYS:SG	2.91	0.53
22:BA:495:G:C1'	40:BS:57:ASN:ND2	2.71	0.53
22:BA:695:G:C2	22:BA:696:G:C8	2.96	0.53
22:BA:1180:U:H2'	22:BA:1181:U:C5'	2.38	0.53
22:BA:2032:G:N7	57:BA:3535:HOH:O	2.33	0.53
22:BA:2061:G:C2	55:BA:3001:VIR:H22	2.44	0.53
22:BA:2243:U:O2	22:BA:2434:A:C2	2.61	0.53
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	2.07	0.53
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.22	0.53
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.44	0.53
1:CA:1535:C:O2'	1:CA:1536:C:C5	2.62	0.53
2:CB:85:LEU:O	2:CB:85:LEU:CG	2.57	0.53
2:CB:141:LEU:O	2:CB:145:GLU:N	2.38	0.53
3:CC:7:PRO:O	3:CC:11:ARG:HG3	2.08	0.53
10:CJ:22:THR:HA	10:CJ:25:ILE:HG22	1.90	0.53
11:CK:126:LYS:O	11:CK:127:ARG:HB2	2.09	0.53
18:CR:25:ASP:O	18:CR:28:THR:N	2.40	0.53
22:DA:1012:U:O4	31:DJ:30:THR:HG21	2.08	0.53
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.08	0.53
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.09	0.53
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.90	0.53
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.89	0.53
28:DG:61:GLY:O	28:DG:64:GLN:N	2.41	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.08	0.53
48:D0:50:ARG:O	48:D0:52:ARG:NH1	2.41	0.53
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.23	0.53
1:AA:71:A:O2'	1:AA:72:A:OP2	2.20	0.53
1:AA:720:C:H5"	18:AR:41:PRO:HA	1.89	0.53
1:AA:872:A:C4	1:AA:874:G:C8	2.96	0.53
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.08	0.53
4:AD:190:ASP:O	4:AD:191:LEU:O	2.26	0.53
13:AM:66:GLU:O	13:AM:69:LEU:N	2.41	0.53
19:AS:51:VAL:HG22	19:AS:71:LEU:HD13	1.90	0.53
22:BA:541:A:C6	22:BA:542:C:C4	2.96	0.53
22:BA:1413:A:C6	22:BA:1414:C:N3	2.76	0.53
22:BA:1789:A:OP1	24:BC:221:ARG:HD3	2.07	0.53
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.42	0.53
30:BI:130:GLU:HB3	30:BI:134:ARG:HH21	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:105:ARG:NH2	32:BK:122:VAL:O	2.41	0.53
34:BM:6:ARG:O	34:BM:7:THR:HG23	2.09	0.53
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.44	0.53
1:CA:369:G:OP2	1:CA:388:G:N2	2.41	0.53
1:CA:575:G:C6	1:CA:821:G:N7	2.76	0.53
1:CA:1169:A:C2	1:CA:1170:A:C4	2.97	0.53
9:CI:114:LYS:HG3	9:CI:120:LYS:HA	1.90	0.53
10:CJ:19:ASP:HA	10:CJ:22:THR:HB	1.90	0.53
20:CT:78:ASN:O	20:CT:82:GLN:HG2	2.08	0.53
22:DA:219:A:N6	22:DA:220:G:C6	2.76	0.53
22:DA:250:G:H2'	22:DA:251:A:C8	2.44	0.53
22:DA:478:A:N6	22:DA:500:G:O2'	2.41	0.53
22:DA:602:A:N3	22:DA:655:A:C2	2.77	0.53
22:DA:668:A:C2	22:DA:670:A:C5	2.97	0.53
22:DA:2236:U:H2'	22:DA:2237:G:O4'	2.09	0.53
22:DA:2886:A:C2	48:D0:29:SER:HB3	2.42	0.53
1:AA:9:G:N7	1:AA:558:G:O2'	2.41	0.53
1:AA:16:A:C2'	1:AA:17:U:H5'	2.39	0.53
1:AA:262:A:C6	1:AA:263:A:C6	2.96	0.53
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.42	0.53
1:AA:1241:G:C2	1:AA:1242:G:C5	2.97	0.53
2:AB:10:LEU:HD23	2:AB:11:LYS:N	2.24	0.53
3:AC:141:ALA:O	3:AC:146:ALA:HB3	2.09	0.53
7:AG:99:LEU:O	7:AG:100:ALA:C	2.52	0.53
22:BA:945:A:H4'	22:BA:946:C:OP2	2.08	0.53
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.43	0.53
22:BA:2308:G:O6	22:BA:2311:A:N7	2.42	0.53
22:BA:2851:A:H2'	22:BA:2852:G:O4'	2.09	0.53
28:BG:38:ASN:O	28:BG:39:ASP:CB	2.57	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
36:BO:69:ASP:O	36:BO:70:ALA:C	2.51	0.53
43:BV:80:HIS:CE1	43:BV:83:LYS:HG2	2.44	0.53
1:CA:485:U:OP2	1:CA:485:U:H4'	2.08	0.53
1:CA:1089:G:C4	1:CA:1090:U:C6	2.97	0.53
2:CB:117:LEU:HB3	2:CB:141:LEU:HD11	1.89	0.53
12:CL:58:THR:CG2	12:CL:59:ASN:N	2.71	0.53
22:DA:900:A:C2	22:DA:901:C:H1'	2.43	0.53
22:DA:1263:U:C5	22:DA:1264:A:N6	2.77	0.53
22:DA:1993:U:H4'	25:DD:133:THR:HG21	1.90	0.53
24:DC:224:ALA:O	57:DC:302:HOH:O	2.18	0.53
25:DD:150:GLN:C	25:DD:151:THR:O	2.50	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
30:DI:58:VAL:CG1	30:DI:59:ILE:N	2.72	0.53
33:DL:100:ILE:O	33:DL:100:ILE:CG1	2.57	0.53
35:DN:12:ARG:CZ	35:DN:20:MET:HE1	2.39	0.53
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.44	0.53
2:AB:85:LEU:HG	2:AB:86:SER:N	2.23	0.53
2:AB:91:PHE:CD1	2:AB:150:GLY:HA3	2.43	0.53
6:AF:3:HIS:HB2	6:AF:92:THR:HG23	1.89	0.53
9:AI:12:ARG:NH2	9:AI:107:ASP:OD2	2.42	0.53
9:AI:45:ARG:O	9:AI:48:VAL:HG23	2.09	0.53
13:AM:46:SER:O	13:AM:47:GLU:CB	2.57	0.53
22:BA:545:U:H3'	22:BA:546:U:H4'	1.89	0.53
22:BA:553:G:C5	22:BA:554:U:C5	2.97	0.53
22:BA:864:G:O2'	22:BA:865:C:H5'	2.09	0.53
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.39	0.53
22:BA:1223:G:C6	22:BA:1227:G:C6	2.97	0.53
22:BA:1876:A:N1	22:BA:1877:A:C4	2.77	0.53
22:BA:1924:C:H2'	22:BA:1925:C:C5'	2.38	0.53
22:BA:2352:A:C4	22:BA:2366:A:C2	2.96	0.53
25:BD:140:HIS:CE1	57:BD:402:HOH:O	2.50	0.53
36:BO:59:ALA:O	36:BO:60:GLU:C	2.51	0.53
40:BS:74:ILE:O	40:BS:74:ILE:HG23	2.08	0.53
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.44	0.53
1:CA:1337:G:H5"	1:CA:1338:G:OP1	2.08	0.53
1:CA:1521:C:C2	1:CA:1522:U:C6	2.97	0.53
5:CE:101:GLU:HA	5:CE:122:ASN:HB2	1.91	0.53
5:CE:103:THR:O	5:CE:122:ASN:HA	2.09	0.53
9:CI:90:TYR:O	9:CI:91:ASP:CG	2.52	0.53
10:CJ:27:GLU:O	10:CJ:31:ARG:HB3	2.09	0.53
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	1.90	0.53
18:CR:58:ALA:O	18:CR:61:ARG:N	2.42	0.53
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.56	0.53
22:DA:307:G:N1	22:DA:310:A:OP2	2.42	0.53
22:DA:469:G:O6	50:D2:37:LYS:NZ	2.35	0.53
22:DA:1082:U:OP1	30:DI:124:ALA:CB	2.56	0.53
22:DA:1255:U:C5	26:DE:68:ALA:HA	2.44	0.53
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.44	0.53
22:DA:1679:A:N6	57:DA:3436:HOH:O	2.39	0.53
22:DA:2133:G:H2'	22:DA:2157:G:H22	1.73	0.53
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.43	0.53
26:DE:75:SER:HB3	26:DE:78:TRP:CE3	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
30:DI:72:LYS:HG3	30:DI:116:ASP:CG	2.33	0.53
32:DK:113:MET:O	32:DK:116:ILE:HG13	2.08	0.53
40:DS:5:ALA:O	40:DS:50:VAL:HG12	2.09	0.53
45:DX:25:THR:O	45:DX:25:THR:HG22	2.07	0.53
1:AA:999:C:H2'	1:AA:1000:A:C8	2.44	0.53
1:AA:1350:A:C6	1:AA:1351:U:C4	2.97	0.53
1:AA:1495:U:O2'	22:BA:1919:A:N1	2.42	0.53
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.91	0.53
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.41	0.53
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.57	0.53
22:BA:1168:G:H2'	22:BA:1169:A:O4'	2.08	0.53
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.27	0.53
22:BA:2291:U:H2'	22:BA:2292:U:C5	2.42	0.53
22:BA:2794:C:H2'	22:BA:2795:C:H6	1.73	0.53
23:BB:110:C:C4	23:BB:111:U:C5	2.97	0.53
25:BD:103:ASP:OD1	25:BD:103:ASP:C	2.52	0.53
32:BK:108:ARG:HD3	32:BK:113:MET:HE1	1.91	0.53
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.08	0.53
1:CA:129:A:H1'	1:CA:130:A:C8	2.44	0.53
1:CA:578:C:C2	1:CA:579:A:C8	2.97	0.53
3:CC:173:VAL:O	3:CC:175:LEU:N	2.40	0.53
18:CR:63:ARG:HB3	18:CR:70:TYR:CZ	2.43	0.53
20:CT:58:VAL:HG13	20:CT:72:ALA:CB	2.39	0.53
22:DA:696:G:N1	22:DA:767:U:C2	2.76	0.53
22:DA:749:A:C6	22:DA:750:A:N7	2.76	0.53
22:DA:972:A:N1	22:DA:973:A:N6	2.57	0.53
22:DA:1187:G:H5"	39:DR:83:TYR:CE2	2.43	0.53
22:DA:1566:A:N3	24:DC:213:TRP:HB2	2.23	0.53
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.09	0.53
22:DA:2186:G:C5	22:DA:2187:U:C5	2.97	0.53
22:DA:2499:C:N4	22:DA:2500:U:O4	2.41	0.53
22:DA:2849:U:C6	22:DA:2867:G:N2	2.77	0.53
26:DE:77:ILE:O	26:DE:77:ILE:CG1	2.57	0.53
27:DF:36:LEU:O	27:DF:88:LYS:HA	2.08	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
33:DL:95:LEU:O	33:DL:100:ILE:HG23	2.09	0.53
39:DR:34:GLU:HG2	39:DR:60:LYS:HG2	1.91	0.53
46:DY:18:LEU:O	46:DY:22:LEU:HB3	2.08	0.53
1:AA:22:G:C5	1:AA:23:C:C5	2.97	0.53
1:AA:958:A:C6	1:AA:959:A:N1	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1466:C:H2'	1:AA:1467:C:O4'	2.08	0.53
2:AB:46:THR:O	2:AB:49:MET:HB2	2.08	0.53
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.08	0.53
2:AB:128:LYS:O	2:AB:129:LEU:C	2.51	0.53
2:AB:210:VAL:O	2:AB:211:THR:C	2.51	0.53
9:AI:61:LEU:N	9:AI:61:LEU:HD22	2.24	0.53
15:AO:37:ASN:O	15:AO:38:HIS:C	2.52	0.53
22:BA:281:C:H2'	22:BA:282:A:C8	2.44	0.53
22:BA:1014:A:C2	22:BA:1149:G:N3	2.77	0.53
22:BA:1917:U:C5	22:BA:1918:A:C6	2.97	0.53
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.24	0.53
1:CA:16:A:H2'	1:CA:17:U:H5'	1.90	0.53
1:CA:183:C:O2'	1:CA:184:G:O5'	2.27	0.53
1:CA:203:G:N2	1:CA:215:C:C2	2.77	0.53
1:CA:344:A:OP2	1:CA:345:C:N4	2.40	0.53
1:CA:374:A:H5"	1:CA:452:A:C2	2.44	0.53
1:CA:577:G:C8	1:CA:816:A:N1	2.77	0.53
1:CA:649:A:H2'	1:CA:650:G:O4'	2.08	0.53
1:CA:1092:A:N1	1:CA:1183:U:O2	2.42	0.53
5:CE:101:GLU:C	5:CE:103:THR:N	2.66	0.53
10:CJ:87:LEU:HD13	10:CJ:88:MET:N	2.24	0.53
22:DA:478:A:C2	22:DA:480:A:C4	2.97	0.53
22:DA:481:G:C4	22:DA:507:A:C2	2.97	0.53
22:DA:532:A:N1	22:DA:2020:A:H1'	2.23	0.53
22:DA:776:G:N7	22:DA:793:A:C4	2.77	0.53
22:DA:1436:G:C2	22:DA:1437:C:H1'	2.44	0.53
22:DA:2857:G:N2	22:DA:2860:A:OP2	2.40	0.53
27:DF:16:LEU:HD11	27:DF:169:LEU:HD12	1.91	0.53
28:DG:91:GLY:O	28:DG:94:TYR:CD2	2.61	0.53
34:DM:76:LYS:NZ	34:DM:85:GLY:O	2.42	0.53
35:DN:117:ASP:O	35:DN:118:ARG:HB2	2.09	0.53
45:DX:7:VAL:HG23	45:DX:51:VAL:HG12	1.91	0.53
1:AA:144:G:C5	1:AA:179:A:C2	2.97	0.53
1:AA:562:U:OP2	12:AL:14:ARG:NH1	2.41	0.53
18:AR:31:ASN:OD1	18:AR:31:ASN:N	2.42	0.53
20:AT:67:ILE:HG13	20:AT:71:LYS:CG	2.39	0.53
22:BA:201:C:OP1	45:BX:18:ARG:NH1	2.41	0.53
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.42	0.53
22:BA:770:G:O2'	22:BA:771:G:H5'	2.09	0.53
22:BA:1109:C:C5	22:BA:1110:G:C6	2.97	0.53
22:BA:1353:A:C8	22:BA:1378:A:N6	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1356:G:N2	22:BA:1357:C:H1'	2.24	0.53
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.44	0.53
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	1.90	0.53
46:BY:6:LEU:HD13	46:BY:56:LEU:HD22	1.91	0.53
1:CA:977:A:H3'	1:CA:977:A:N3	2.24	0.53
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	1.90	0.53
10:CJ:35:GLN:O	10:CJ:36:VAL:HB	2.09	0.53
22:DA:1544:A:N6	22:DA:1545:A:N1	2.57	0.53
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.09	0.53
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.25	0.53
22:DA:2312:U:OP1	27:DF:70:ALA:HA	2.09	0.53
25:DD:8:LYS:HD3	25:DD:196:ALA:O	2.08	0.53
26:DE:58:LYS:HD3	26:DE:60:TRP:O	2.09	0.53
1:AA:1157:A:C4	1:AA:1181:G:C6	2.97	0.52
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.08	0.52
7:AG:129:GLU:O	7:AG:130:ASN:C	2.51	0.52
8:AH:30:SER:OG	8:AH:33:LYS:HG3	2.09	0.52
11:AK:69:ARG:CD	22:BA:2146:C:N3	2.72	0.52
12:AL:38:TYR:O	12:AL:39:THR:HG22	2.08	0.52
22:BA:1565:C:OP1	24:BC:18:LYS:CE	2.57	0.52
22:BA:1779:U:C5	22:BA:1784:A:N7	2.67	0.52
22:BA:2023:C:H2'	22:BA:2024:G:H5'	1.89	0.52
22:BA:2097:A:C2	22:BA:2193:G:C6	2.97	0.52
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.08	0.52
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.39	0.52
1:CA:840:C:N3	1:CA:842:U:H4'	2.24	0.52
7:CG:4:ARG:HG3	7:CG:5:ARG:N	2.23	0.52
9:CI:31:ASN:O	9:CI:32:GLN:C	2.51	0.52
9:CI:87:LEU:C	9:CI:89:GLU:H	2.16	0.52
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.39	0.52
22:DA:195:A:C6	22:DA:198:C:C5	2.97	0.52
22:DA:305:C:C2	22:DA:313:G:N1	2.78	0.52
22:DA:575:A:C2	22:DA:576:U:C6	2.97	0.52
22:DA:1327:A:H2'	22:DA:1328:A:O4'	2.10	0.52
22:DA:1754:A:C6	22:DA:1755:A:C6	2.97	0.52
22:DA:1786:A:H1'	22:DA:1938:A:N6	2.24	0.52
22:DA:2142:A:C6	22:DA:2143:C:C4	2.97	0.52
23:DB:32:U:C2	23:DB:51:G:N2	2.77	0.52
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.07	0.52
30:DI:117:MET:SD	30:DI:125:MET:HG2	2.48	0.52
42:DU:74:ASN:HB2	42:DU:81:ASP:OD2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:17:GLU:HB2	46:DY:53:VAL:HG11	1.91	0.52
46:DY:45:GLN:C	46:DY:47:ARG:N	2.67	0.52
2:AB:80:VAL:N	2:AB:82:ASP:OD2	2.42	0.52
6:AF:51:ILE:HD12	6:AF:86:ARG:CZ	2.39	0.52
7:AG:49:THR:O	7:AG:53:ARG:HB3	2.09	0.52
22:BA:283:G:C5	22:BA:284:U:C5	2.98	0.52
22:BA:1300:G:H5"	22:BA:1301:A:H5'	1.92	0.52
22:BA:1842:G:O4'	24:BC:243:HIS:CE1	2.62	0.52
22:BA:2553:G:H2'	22:BA:2554:U:O4'	2.09	0.52
28:BG:38:ASN:O	28:BG:39:ASP:HB2	2.07	0.52
28:BG:121:ILE:HD12	28:BG:141:ILE:CG2	2.38	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.09	0.52
7:CG:74:GLU:O	7:CG:88:PRO:HA	2.08	0.52
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.44	0.52
14:CN:24:ARG:HG2	14:CN:27:LEU:HD12	1.91	0.52
22:DA:85:G:OP1	42:DU:7:ARG:N	2.42	0.52
22:DA:1430:G:H2'	22:DA:1431:A:O4'	2.09	0.52
22:DA:2815:C:H2'	22:DA:2816:G:O4'	2.10	0.52
23:DB:71:C:C2'	23:DB:72:G:H5'	2.40	0.52
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.52
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.44	0.52
40:DS:12:SER:O	40:DS:99:ARG:O	2.28	0.52
42:DU:52:LEU:O	42:DU:53:ASN:CG	2.52	0.52
43:DV:51:GLN:HB3	43:DV:56:PHE:CG	2.43	0.52
1:AA:71:A:N1	1:AA:99:C:O2'	2.43	0.52
1:AA:1237:C:C4	1:AA:1336:C:N3	2.77	0.52
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.63	0.52
2:AB:162:PHE:HA	2:AB:184:PHE:O	2.09	0.52
3:AC:7:PRO:HD2	3:AC:184:TYR:CD1	2.44	0.52
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.24	0.52
5:AE:149:SER:OG	5:AE:152:MET:HB2	2.10	0.52
6:AF:99:ALA:O	6:AF:100:SER:CB	2.57	0.52
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.40	0.52
22:BA:164:C:H2'	22:BA:165:A:O4'	2.09	0.52
22:BA:572:A:C2	22:BA:2033:A:C2	2.97	0.52
22:BA:590:A:H2'	22:BA:591:U:C6	2.44	0.52
22:BA:1416:G:O2'	22:BA:1417:C:H6	1.93	0.52
22:BA:1442:U:H2'	22:BA:1443:U:H6	1.73	0.52
22:BA:1565:C:OP1	24:BC:18:LYS:HE2	2.09	0.52
22:BA:1700:A:H5'	22:BA:1701:A:OP2	2.09	0.52
22:BA:2140:G:C2	22:BA:2152:G:N1	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:64:ASP:O	30:BI:66:SER:N	2.42	0.52
30:BI:72:LYS:N	30:BI:72:LYS:HD3	2.24	0.52
43:BV:14:LYS:HD2	43:BV:18:ARG:HH12	1.73	0.52
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.57	0.52
1:CA:134:G:H2'	1:CA:135:C:O4'	2.08	0.52
1:CA:154:U:C2'	1:CA:155:A:H5'	2.40	0.52
1:CA:833:G:C4	1:CA:834:U:C6	2.98	0.52
1:CA:1302:C:C4	13:CM:17:ILE:CD1	2.93	0.52
12:CL:65:SER:HB2	12:CL:82:ILE:HD11	1.91	0.52
19:CS:31:LEU:O	19:CS:33:THR:N	2.40	0.52
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.09	0.52
21:CU:39:GLU:CD	21:CU:42:THR:HG1	2.18	0.52
22:DA:116:C:C5	22:DA:117:G:N7	2.78	0.52
22:DA:370:G:O2'	22:DA:423:A:H3'	2.10	0.52
22:DA:370:G:C6	22:DA:424:G:C5	2.97	0.52
22:DA:1379:U:O2	22:DA:1379:U:H2'	2.09	0.52
22:DA:1509:A:N3	22:DA:1510:G:C8	2.77	0.52
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.90	0.52
22:DA:2635:A:N6	22:DA:2636:C:C4	2.77	0.52
22:DA:2850:A:OP2	22:DA:2866:U:N3	2.36	0.52
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.09	0.52
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.42	0.52
29:DH:72:ILE:HG22	29:DH:72:ILE:O	2.09	0.52
34:DM:72:PRO:HB3	34:DM:92:TRP:CZ3	2.44	0.52
43:DV:21:ARG:HA	43:DV:25:LYS:O	2.09	0.52
46:DY:57:LEU:HA	46:DY:60:LYS:HB3	1.90	0.52
1:AA:4:U:O2	1:AA:4:U:H2'	2.09	0.52
1:AA:135:C:N3	16:AP:1:MET:N	2.52	0.52
1:AA:544:G:C5	1:AA:545:C:C5	2.97	0.52
1:AA:1048:G:N3	1:AA:1050:G:C8	2.78	0.52
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.91	0.52
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	1.92	0.52
9:AI:21:ILE:HG22	9:AI:22:LYS:N	2.25	0.52
10:AJ:63:ASP:OD2	14:AN:85:ARG:HD2	2.10	0.52
17:AQ:8:LEU:HD23	17:AQ:25:ILE:HD12	1.91	0.52
22:BA:65:U:H2'	22:BA:66:C:C6	2.45	0.52
22:BA:736:C:C2	22:BA:737:C:C5	2.97	0.52
22:BA:1353:A:C6	22:BA:1354:A:C6	2.97	0.52
22:BA:1585:C:H2'	22:BA:1586:A:H5'	1.91	0.52
22:BA:1717:A:C2	22:BA:1718:G:H1'	2.45	0.52
22:BA:2747:G:C2	22:BA:2756:U:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:109:A:C6	23:BB:110:C:N3	2.77	0.52
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.10	0.52
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.09	0.52
1:CA:149:A:C2	1:CA:150:U:C2	2.97	0.52
1:CA:706:A:C1'	11:CK:31:ILE:HD11	2.40	0.52
1:CA:1314:C:C5	19:CS:6:LYS:HE2	2.44	0.52
22:DA:186:G:N1	22:DA:211:C:C2	2.77	0.52
22:DA:190:A:C2'	22:DA:679:C:O2'	2.58	0.52
22:DA:271:G:H1'	22:DA:272:A:O5'	2.09	0.52
22:DA:995:C:C5	38:DQ:57:PHE:CE2	2.98	0.52
22:DA:1731:G:N1	22:DA:1733:G:C4	2.78	0.52
22:DA:2461:A:C2	22:DA:2490:G:N2	2.77	0.52
22:DA:2467:C:N4	22:DA:2468:A:C6	2.78	0.52
22:DA:2824:C:N4	22:DA:2825:G:C5	2.77	0.52
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.24	0.52
31:DJ:31:GLU:HG3	31:DJ:142:ILE:HD11	1.91	0.52
4:AD:190:ASP:OD1	4:AD:190:ASP:N	2.42	0.52
7:AG:40:GLU:HA	7:AG:43:VAL:CG2	2.40	0.52
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	1.91	0.52
22:BA:139:U:O2'	22:BA:141:G:N1	2.36	0.52
22:BA:595:C:H2'	22:BA:596:U:C6	2.44	0.52
22:BA:1244:A:OP1	33:BL:7:SER:OG	2.26	0.52
22:BA:1423:G:O6	57:BA:3629:HOH:O	2.19	0.52
22:BA:1525:A:N7	22:BA:1526:C:C5	2.77	0.52
22:BA:2748:A:H1'	28:BG:67:THR:HG22	1.90	0.52
25:BD:8:LYS:HB2	25:BD:201:LEU:HD11	1.92	0.52
27:BF:105:THR:HG22	27:BF:106:ILE:HG23	1.90	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
36:BO:12:THR:HG22	36:BO:12:THR:O	2.09	0.52
40:BS:83:LYS:C	40:BS:84:ARG:HG2	2.32	0.52
49:B1:35:GLU:HG2	49:B1:50:LYS:HG3	1.91	0.52
1:CA:155:A:N1	1:CA:167:A:C6	2.78	0.52
1:CA:211:G:O2'	1:CA:212:G:H4'	2.10	0.52
1:CA:246:A:C4	1:CA:279:A:C6	2.98	0.52
1:CA:716:A:N3	11:CK:119:ASN:O	2.43	0.52
1:CA:731:G:H5'	1:CA:766:A:H4'	1.90	0.52
1:CA:960:U:C4	1:CA:1225:A:C8	2.97	0.52
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.25	0.52
4:CD:150:LYS:O	4:CD:151:LYS:C	2.51	0.52
4:CD:202:GLU:CD	5:CE:105:ILE:CG2	2.83	0.52
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:51:GLY:O	11:CK:52:PHE:O	2.28	0.52
22:DA:53:A:C8	22:DA:54:G:N7	2.77	0.52
22:DA:657:U:C2	22:DA:658:U:C5	2.97	0.52
22:DA:1445:G:C2	22:DA:1547:C:N3	2.77	0.52
22:DA:1530:G:N2	22:DA:1542:U:C2	2.76	0.52
22:DA:1655:A:C2	22:DA:1656:C:H1'	2.44	0.52
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.24	0.52
22:DA:1820:U:O2	24:DC:200:HIS:HB3	2.09	0.52
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.45	0.52
22:DA:2050:C:C4	22:DA:2051:A:C6	2.97	0.52
22:DA:2198:A:C2	29:DH:29:PHE:HB2	2.44	0.52
22:DA:2765:A:H5'	22:DA:2766:A:OP2	2.09	0.52
33:DL:81:ASP:O	33:DL:82:LEU:HB3	2.09	0.52
35:DN:20:MET:HG3	35:DN:21:PHE:N	2.24	0.52
1:AA:188:C:N3	1:AA:189:A:C2	2.77	0.52
1:AA:209:U:H4'	1:AA:210:C:OP2	2.09	0.52
1:AA:233:C:H2'	1:AA:234:C:C6	2.45	0.52
1:AA:557:G:C6	1:AA:558:G:C6	2.98	0.52
1:AA:702:A:H3'	1:AA:703:G:C5'	2.39	0.52
1:AA:818:G:O2'	1:AA:819:A:H5'	2.09	0.52
1:AA:984:C:N3	1:AA:1222:G:C2	2.78	0.52
1:AA:1010:U:H2'	1:AA:1011:C:C6	2.44	0.52
2:AB:33:GLY:O	2:AB:34:ALA:HB2	2.09	0.52
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.57	0.52
4:AD:36:GLN:O	4:AD:37:ALA:HB2	2.09	0.52
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.38	0.52
10:AJ:37:ARG:HB2	10:AJ:75:ASP:HB3	1.91	0.52
13:AM:83:LEU:HD21	19:AS:65:GLU:CG	2.39	0.52
15:AO:45:GLU:HG2	15:AO:46:HIS:N	2.25	0.52
17:AQ:53:CYS:SG	17:AQ:75:LEU:HD23	2.50	0.52
20:AT:48:GLN:OE1	20:AT:52:ASN:ND2	2.43	0.52
20:AT:79:LEU:O	20:AT:82:GLN:HB2	2.10	0.52
22:BA:637:A:N1	22:BA:651:G:O2'	2.43	0.52
22:BA:804:A:H5"	22:BA:805:G:OP1	2.10	0.52
22:BA:1916:A:C4	22:BA:1917:U:C1'	2.79	0.52
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.09	0.52
24:BC:235:GLY:O	24:BC:236:GLU:HB2	2.10	0.52
25:BD:99:GLU:HG2	25:BD:182:ALA:HB2	1.90	0.52
30:BI:11:LEU:HD12	30:BI:24:VAL:HG12	1.91	0.52
39:BR:68:ARG:HD3	39:BR:92:TRP:CE2	2.45	0.52
45:BX:56:MET:O	45:BX:59:ILE:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.57	0.52
49:B1:10:LYS:C	49:B1:11:LEU:HD23	2.34	0.52
1:CA:50:A:N6	1:CA:361:G:H4'	2.25	0.52
1:CA:238:A:O2'	1:CA:239:U:H5'	2.10	0.52
1:CA:409:U:OP1	4:CD:24:GLY:CA	2.57	0.52
1:CA:815:A:N7	1:CA:1509:C:O2'	2.40	0.52
1:CA:1226:C:H2'	13:CM:102:THR:HB	1.91	0.52
4:CD:166:GLU:O	4:CD:167:LYS:HB2	2.07	0.52
9:CI:127:PHE:C	9:CI:127:PHE:CD1	2.87	0.52
10:CJ:27:GLU:O	10:CJ:27:GLU:HG2	2.09	0.52
19:CS:58:VAL:HG11	19:CS:75:ALA:HA	1.92	0.52
22:DA:53:A:C2	22:DA:179:C:H4'	2.44	0.52
22:DA:132:G:N2	22:DA:148:U:C2	2.78	0.52
22:DA:463:G:C2	22:DA:467:G:C6	2.97	0.52
22:DA:527:C:OP1	57:DA:3246:HOH:O	2.18	0.52
22:DA:1011:G:C2	22:DA:1013:C:C2	2.97	0.52
22:DA:1343:G:C6	22:DA:1344:U:O4	2.63	0.52
22:DA:1465:G:C5	22:DA:1466:U:C4	2.98	0.52
22:DA:1623:G:C5	22:DA:1624:U:C5	2.97	0.52
22:DA:1827:U:H2'	22:DA:1828:G:O4'	2.09	0.52
22:DA:2145:C:H5"	22:DA:2146:C:OP1	2.08	0.52
22:DA:2506:U:C5	22:DA:2585:U:O4	2.62	0.52
22:DA:2707:U:O2	35:DN:71:ARG:NH1	2.42	0.52
23:DB:46:A:C5	23:DB:47:C:C5	2.98	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.08	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
1:AA:8:A:H5'	5:AE:125:ALA:O	2.10	0.52
1:AA:64:G:C2	1:AA:67:C:N4	2.77	0.52
1:AA:662:U:H2'	1:AA:663:A:C8	2.45	0.52
1:AA:1160:G:HO2'	1:AA:1161:C:P	2.32	0.52
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.58	0.52
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.92	0.52
4:AD:95:GLU:OE2	4:AD:100:ASN:ND2	2.42	0.52
6:AF:90:MET:HG2	18:AR:61:ARG:NH2	2.25	0.52
8:AH:3:MET:O	8:AH:5:ASP:N	2.43	0.52
10:AJ:17:LEU:HD23	10:AJ:18:ILE:N	2.24	0.52
12:AL:38:TYR:HB2	12:AL:52:VAL:HG23	1.91	0.52
20:AT:67:ILE:O	20:AT:68:HIS:C	2.52	0.52
21:AU:29:LEU:HD23	21:AU:29:LEU:C	2.34	0.52
22:BA:12:U:O2	22:BA:12:U:C2'	2.58	0.52
22:BA:1064:C:O2	22:BA:1074:G:N2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1179:G:C8	22:BA:1180:U:O4'	2.62	0.52
22:BA:1365:A:O5'	45:BX:28:ARG:NH2	2.43	0.52
22:BA:1754:A:N6	22:BA:1755:A:N6	2.57	0.52
22:BA:1925:C:H5"	22:BA:1926:U:O4	2.10	0.52
22:BA:2808:G:C2	22:BA:2891:U:C6	2.97	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
38:BQ:9:ILE:HG13	38:BQ:10:ALA:N	2.24	0.52
39:BR:46:GLU:OE1	39:BR:46:GLU:CA	2.58	0.52
1:CA:62:U:O2'	1:CA:379:C:O2	2.25	0.52
1:CA:282:A:C8	1:CA:283:U:C5	2.98	0.52
1:CA:309:A:H1'	1:CA:608:A:C2	2.45	0.52
1:CA:945:G:C2	1:CA:946:A:C8	2.97	0.52
1:CA:1386:G:N3	1:CA:1387:G:C8	2.77	0.52
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.45	0.52
7:CG:42:ILE:HG21	7:CG:116:MET:HG3	1.91	0.52
22:DA:969:G:H2'	22:DA:970:U:C6	2.45	0.52
22:DA:1401:G:C6	22:DA:1402:U:C4	2.98	0.52
22:DA:2808:G:H4'	22:DA:2809:A:O5'	2.09	0.52
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.45	0.52
24:DC:33:LEU:C	24:DC:64:ILE:HD12	2.34	0.52
28:DG:41:VAL:HG12	28:DG:42:GLU:N	2.24	0.52
1:AA:109:A:H4'	1:AA:110:C:OP2	2.10	0.52
1:AA:861:G:HO2'	1:AA:874:G:HO2'	1.55	0.52
1:AA:1119:C:OP1	9:AI:85:ARG:NH2	2.41	0.52
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.45	0.52
1:AA:1299:A:C6	1:AA:1301:U:O2	2.63	0.52
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.08	0.52
4:AD:143:VAL:O	4:AD:143:VAL:HG23	2.09	0.52
5:AE:45:ARG:HA	5:AE:72:ILE:O	2.10	0.52
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.55	0.52
22:BA:1266:G:O2'	22:BA:2012:G:O6	2.27	0.52
22:BA:1857:G:N2	22:BA:1884:G:H1'	2.24	0.52
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.24	0.52
22:BA:2187:U:H2'	22:BA:2188:U:O4'	2.10	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
41:BT:11:LEU:N	41:BT:11:LEU:CD2	2.73	0.52
53:B5:83:LYS:HB3	53:B5:87:ALA:CB	2.40	0.52
1:CA:774:G:C6	1:CA:775:G:C5	2.97	0.52
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.58	0.52
2:CB:21:ARG:HA	2:CB:21:ARG:NE	2.24	0.52
5:CE:126:LYS:HA	5:CE:126:LYS:HE3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:71:LYS:HE3	20:CT:75:HIS:CE1	2.45	0.52
22:DA:972:A:C6	22:DA:973:A:C6	2.98	0.52
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.40	0.52
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.44	0.52
24:DC:267:ILE:O	24:DC:267:ILE:HG22	2.09	0.52
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.92	0.52
26:DE:146:VAL:HA	26:DE:185:LYS:O	2.10	0.52
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.58	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.10	0.52
1:AA:1014:A:C2	19:AS:34:TRP:CZ2	2.98	0.52
2:AB:147:SER:O	2:AB:148:LEU:HG	2.09	0.52
7:AG:49:THR:O	7:AG:53:ARG:CB	2.58	0.52
8:AH:20:ALA:O	8:AH:21:ASN:C	2.53	0.52
13:AM:47:GLU:O	13:AM:49:SER:N	2.43	0.52
22:BA:441:U:H2'	22:BA:442:G:C8	2.45	0.52
22:BA:1605:C:C3'	22:BA:1606:C:H5'	2.40	0.52
23:BB:112:G:N2	36:BO:45:SER:O	2.37	0.52
24:BC:70:ASN:O	24:BC:71:LYS:C	2.53	0.52
24:BC:146:MET:SD	24:BC:154:LEU:HD21	2.50	0.52
30:BI:44:ALA:O	30:BI:45:LYS:HD3	2.09	0.52
30:BI:59:ILE:HG22	30:BI:61:VAL:HG23	1.91	0.52
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.91	0.52
42:BU:49:VAL:O	42:BU:49:VAL:HG13	2.09	0.52
46:BY:16:THR:HA	46:BY:19:LEU:HB2	1.91	0.52
1:CA:41:G:H2'	1:CA:42:G:C8	2.45	0.52
1:CA:158:G:C5	1:CA:164:G:C6	2.98	0.52
1:CA:570:G:H2'	1:CA:571:U:C6	2.45	0.52
1:CA:978:A:C5	1:CA:1318:A:N6	2.78	0.52
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.40	0.52
14:CN:49:GLN:C	14:CN:51:LEU:H	2.18	0.52
17:CQ:29:VAL:O	17:CQ:29:VAL:CG2	2.56	0.52
22:DA:295:G:N2	22:DA:296:U:C6	2.77	0.52
22:DA:811:U:O2	22:DA:1251:C:C6	2.63	0.52
22:DA:1120:G:C6	22:DA:1121:C:C4	2.98	0.52
22:DA:1154:G:OP1	38:DQ:58:ARG:HD3	2.10	0.52
22:DA:1203:U:O2'	33:DL:4:ASN:OD1	2.28	0.52
22:DA:1636:U:O2'	22:DA:1760:C:O2'	2.27	0.52
22:DA:2223:G:C6	22:DA:2224:G:C4	2.98	0.52
22:DA:2428:G:H5"	22:DA:2429:G:OP1	2.10	0.52
22:DA:2663:G:H2'	22:DA:2664:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.92	0.52
24:DC:148:PRO:HD3	24:DC:185:GLU:OE2	2.10	0.52
27:DF:73:SER:HB2	27:DF:81:GLN:CB	2.40	0.52
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.73	0.52
41:DT:64:LYS:HA	41:DT:79:ASP:OD2	2.10	0.52
1:AA:41:G:H2'	1:AA:42:G:H8	1.74	0.52
1:AA:220:G:C5	1:AA:221:C:C5	2.98	0.52
1:AA:587:G:N2	1:AA:755:G:C5	2.78	0.52
1:AA:724:G:N3	1:AA:725:G:C8	2.78	0.52
1:AA:815:A:H4'	1:AA:817:C:C4	2.45	0.52
1:AA:933:G:N7	7:AG:3:ARG:NH1	2.58	0.52
1:AA:935:A:C2	1:AA:936:C:C2	2.97	0.52
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.42	0.52
5:AE:157:ARG:CD	8:AH:43:GLU:O	2.58	0.52
11:AK:126:LYS:HA	21:AU:34:ARG:HH21	1.73	0.52
11:AK:126:LYS:CA	21:AU:34:ARG:HH21	2.23	0.52
12:AL:3:THR:CG2	12:AL:4:VAL:N	2.72	0.52
13:AM:3:ARG:HG3	13:AM:4:ILE:N	2.24	0.52
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.10	0.52
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.92	0.52
22:BA:321:U:OP2	26:BE:131:THR:HG23	2.09	0.52
22:BA:381:G:OP1	45:BX:18:ARG:NH2	2.42	0.52
22:BA:1454:C:H5'	35:BN:63:ARG:HD2	1.92	0.52
22:BA:2794:C:H2'	22:BA:2795:C:C6	2.44	0.52
28:BG:86:LYS:HG2	28:BG:132:VAL:HG13	1.91	0.52
1:CA:520:A:OP1	12:CL:49:LEU:HB2	2.09	0.52
1:CA:774:G:C5	1:CA:775:G:C8	2.98	0.52
1:CA:949:A:C2	1:CA:1233:G:N3	2.78	0.52
1:CA:1243:C:N4	1:CA:1244:G:O6	2.43	0.52
1:CA:1523:G:OP1	11:CK:125:LYS:NZ	2.34	0.52
17:CQ:51:ASN:O	17:CQ:52:GLU:O	2.27	0.52
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.09	0.52
22:DA:46:G:C2	22:DA:47:C:C5	2.97	0.52
22:DA:443:A:N7	26:DE:40:ARG:HG3	2.25	0.52
22:DA:565:C:H4'	22:DA:1253:A:N6	2.24	0.52
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.09	0.52
26:DE:83:VAL:HG11	26:DE:86:ALA:HA	1.92	0.52
28:DG:123:ALA:HB2	28:DG:133:LEU:HA	1.92	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.09	0.52
41:DT:38:ALA:O	41:DT:39:THR:CB	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:772:U:C2'	1:AA:773:G:O5'	2.58	0.51
9:AI:91:ASP:OD1	9:AI:93:SER:N	2.42	0.51
13:AM:16:VAL:CG1	13:AM:41:GLU:HB2	2.40	0.51
14:AN:43:ASN:C	14:AN:45:VAL:N	2.66	0.51
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.45	0.51
16:AP:61:VAL:HG22	16:AP:67:ILE:HD11	1.90	0.51
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.53	0.51
22:BA:511:U:O4	22:BA:512:G:C2	2.63	0.51
22:BA:545:U:H2'	22:BA:546:U:O3'	2.10	0.51
22:BA:1414:C:C4	22:BA:1415:U:C5	2.98	0.51
22:BA:1459:G:C5	22:BA:1461:C:C4	2.98	0.51
22:BA:1750:G:C5	22:BA:1751:U:C4	2.98	0.51
22:BA:2114:A:H2'	22:BA:2114:A:N3	2.24	0.51
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.09	0.51
24:BC:18:LYS:HZ2	24:BC:18:LYS:HB3	1.75	0.51
26:BE:149:ILE:CD1	26:BE:172:ALA:HA	2.39	0.51
28:BG:54:PRO:HG3	28:BG:62:TRP:CE2	2.45	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
40:BS:83:LYS:O	40:BS:84:ARG:HD3	2.10	0.51
42:BU:99:ASN:C	42:BU:99:ASN:OD1	2.52	0.51
44:BW:47:ALA:HB1	44:BW:51:VAL:O	2.09	0.51
1:CA:4:U:O2	1:CA:4:U:H2'	2.08	0.51
1:CA:130:A:O2'	1:CA:131:A:O5'	2.28	0.51
1:CA:600:A:C2	1:CA:639:G:C2	2.97	0.51
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.44	0.51
2:CB:99:GLY:HA2	2:CB:175:GLU:OE1	2.11	0.51
5:CE:157:ARG:O	5:CE:159:LYS:N	2.40	0.51
7:CG:11:LYS:HD2	7:CG:11:LYS:N	2.25	0.51
7:CG:75:VAL:HG21	7:CG:144:MET:HG2	1.91	0.51
11:CK:124:PRO:HB2	11:CK:126:LYS:HE3	1.91	0.51
14:CN:3:LYS:HB3	14:CN:6:MET:HG2	1.92	0.51
20:CT:28:MET:HE3	20:CT:58:VAL:HG22	1.92	0.51
20:CT:35:VAL:HG11	20:CT:79:LEU:HD13	1.92	0.51
22:DA:319:G:H2'	22:DA:320:A:O4'	2.10	0.51
22:DA:445:C:H2'	22:DA:446:G:C8	2.45	0.51
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.74	0.51
22:DA:2135:A:C2	22:DA:2136:G:H1'	2.45	0.51
22:DA:2372:U:O4'	49:D1:46:HIS:ND1	2.42	0.51
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.40	0.51
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.45	0.51
23:DB:5:U:H2'	23:DB:6:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:108:G:C5'	1:AA:108:G:N3	2.74	0.51
1:AA:411:A:C6	1:AA:429:U:C4	2.99	0.51
1:AA:1270:G:O3'	1:AA:1314:C:H5'	2.10	0.51
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.45	0.51
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.92	0.51
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	1.91	0.51
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.44	0.51
16:AP:73:ALA:O	16:AP:77:GLU:HB2	2.10	0.51
17:AQ:54:GLY:N	17:AQ:57:ASP:OD2	2.40	0.51
22:BA:1122:G:H2'	22:BA:1122:G:N3	2.24	0.51
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.58	0.51
22:BA:2010:G:O2'	22:BA:2011:U:H5'	2.10	0.51
22:BA:2286:G:H4'	22:BA:2287:A:O5'	2.09	0.51
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.10	0.51
24:BC:235:GLY:HA3	24:BC:239:ASN:HB2	1.92	0.51
26:BE:79:ARG:O	26:BE:80:SER:CB	2.59	0.51
27:BF:107:ALA:C	27:BF:109:PRO:HD2	2.35	0.51
49:B1:50:LYS:O	49:B1:51:GLU:HB3	2.09	0.51
1:CA:39:G:N2	1:CA:40:C:C2	2.79	0.51
1:CA:515:G:H2'	1:CA:516:U:O4'	2.10	0.51
1:CA:695:A:H2'	1:CA:696:A:C8	2.45	0.51
4:CD:90:LEU:HD21	4:CD:200:ILE:HD11	1.91	0.51
5:CE:72:ILE:HD13	5:CE:145:GLU:HG3	1.93	0.51
12:CL:80:ILE:HD12	12:CL:97:THR:CG2	2.40	0.51
14:CN:2:ALA:O	14:CN:3:LYS:CB	2.57	0.51
19:CS:11:ILE:HG13	19:CS:12:ASP:N	2.25	0.51
21:CU:35:ARG:NH2	57:CU:102:HOH:O	2.43	0.51
22:DA:126:A:N7	22:DA:127:A:N1	2.58	0.51
22:DA:146:A:C2	22:DA:147:C:C2	2.98	0.51
22:DA:159:G:O2'	22:DA:167:A:N6	2.38	0.51
22:DA:425:G:C2	22:DA:426:C:C4	2.98	0.51
22:DA:1483:G:C6	22:DA:1484:U:C4	2.97	0.51
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.45	0.51
22:DA:1566:A:C2	24:DC:213:TRP:CE3	2.98	0.51
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.63	0.51
24:DC:144:VAL:HB	24:DC:154:LEU:HB2	1.92	0.51
39:DR:49:ILE:HD13	39:DR:52:PRO:HA	1.92	0.51
39:DR:58:VAL:HG13	39:DR:102:SER:HB2	1.91	0.51
1:AA:189:A:H2'	1:AA:190:A:O4'	2.10	0.51
1:AA:756:C:H2'	1:AA:757:U:O4'	2.10	0.51
1:AA:797:C:OP2	11:AK:126:LYS:HE2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:819:A:H4'	1:AA:820:U:OP2	2.11	0.51
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.52	0.51
1:AA:1315:U:C4	1:AA:1316:G:C6	2.99	0.51
10:AJ:11:LYS:HA	10:AJ:70:HIS:O	2.10	0.51
19:AS:4:SER:HB2	19:AS:5:LEU:HD12	1.93	0.51
22:BA:544:C:H5'	22:BA:545:U:OP2	2.10	0.51
22:BA:1356:G:C2	22:BA:1376:C:O2	2.63	0.51
22:BA:1922:G:C2	22:BA:1923:U:C6	2.97	0.51
34:BM:69:PRO:O	34:BM:70:ASP:OD2	2.28	0.51
36:BO:100:HIS:O	36:BO:104:GLN:HB3	2.10	0.51
1:CA:121:U:H3'	1:CA:122:G:C5'	2.39	0.51
1:CA:237:G:C6	1:CA:238:A:C5	2.99	0.51
1:CA:1166:G:O2'	1:CA:1169:A:N6	2.43	0.51
1:CA:1328:C:H5"	13:CM:28:THR:HG21	1.92	0.51
4:CD:48:LEU:HD23	4:CD:52:GLY:C	2.35	0.51
5:CE:44:GLY:O	5:CE:45:ARG:C	2.52	0.51
6:CF:38:ARG:HG3	6:CF:62:MET:O	2.10	0.51
11:CK:52:PHE:CE1	11:CK:62:ALA:HB1	2.45	0.51
17:CQ:49:GLU:C	17:CQ:50:ASN:CG	2.77	0.51
21:CU:44:GLU:OE1	21:CU:45:ARG:NH1	2.43	0.51
22:DA:40:U:C4	22:DA:41:C:N4	2.78	0.51
22:DA:370:G:C6	22:DA:424:G:N7	2.79	0.51
22:DA:374:A:N6	22:DA:400:G:O2'	2.43	0.51
22:DA:422:A:C2	22:DA:423:A:C4	2.98	0.51
22:DA:680:C:H2'	22:DA:681:G:C8	2.45	0.51
22:DA:1007:C:OP1	31:DJ:37:ARG:NH2	2.43	0.51
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.46	0.51
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.58	0.51
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.10	0.51
22:DA:2061:G:H5"	22:DA:2503:A:C2	2.45	0.51
22:DA:2731:G:C6	22:DA:2732:G:O6	2.64	0.51
25:DD:3:GLY:C	25:DD:82:PHE:CE1	2.89	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
37:DP:53:ARG:O	37:DP:56:HIS:N	2.42	0.51
41:DT:34:VAL:HG21	41:DT:43:ILE:HD11	1.92	0.51
42:DU:38:GLY:HA2	42:DU:41:LEU:CD2	2.40	0.51
43:DV:9:ARG:CG	43:DV:41:GLU:HB3	2.40	0.51
1:AA:1211:U:O2'	1:AA:1212:U:P	2.68	0.51
5:AE:100:SER:O	5:AE:101:GLU:C	2.53	0.51
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.92	0.51
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:102:ALA:C	11:AK:104:GLY:N	2.67	0.51
13:AM:40:ALA:HB3	13:AM:43:VAL:CG1	2.41	0.51
16:AP:76:LYS:HG3	16:AP:76:LYS:O	2.11	0.51
17:AQ:5:ILE:O	17:AQ:6:ARG:HB2	2.10	0.51
22:BA:576:U:H2'	22:BA:577:G:C8	2.46	0.51
22:BA:811:U:C2	22:BA:1251:C:C5	2.98	0.51
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.09	0.51
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.91	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
38:BQ:76:TYR:CZ	38:BQ:80:ILE:HG13	2.46	0.51
1:CA:322:C:O2	1:CA:332:G:N2	2.43	0.51
1:CA:330:C:O2	1:CA:330:C:H2'	2.10	0.51
1:CA:811:C:N4	1:CA:812:G:O6	2.43	0.51
1:CA:811:C:H4'	1:CA:900:A:N6	2.26	0.51
2:CB:19:GLN:HB3	2:CB:189:THR:OG1	2.09	0.51
5:CE:82:GLN:OE1	5:CE:150:PRO:CD	2.58	0.51
12:CL:65:SER:OG	12:CL:97:THR:HG23	2.10	0.51
22:DA:301:G:O4'	22:DA:317:G:N2	2.44	0.51
22:DA:533:G:C5	22:DA:534:U:C4	2.99	0.51
22:DA:669:G:N2	22:DA:670:A:N1	2.59	0.51
22:DA:1317:G:N2	22:DA:1336:A:C2	2.78	0.51
22:DA:1362:C:H2'	22:DA:1363:C:C5'	2.41	0.51
22:DA:1930:G:O2'	22:DA:1931:U:P	2.68	0.51
22:DA:2294:G:P	36:DO:94:ARG:HH12	2.33	0.51
22:DA:2657:A:C4	22:DA:2665:A:C6	2.98	0.51
22:DA:2679:A:C2	22:DA:2680:U:C2	2.98	0.51
22:DA:2845:U:H5"	37:DP:52:ASN:O	2.11	0.51
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.11	0.51
32:DK:107:LEU:O	32:DK:109:SER:N	2.43	0.51
51:D3:52:LYS:O	51:D3:55:LEU:N	2.44	0.51
1:AA:353:A:C2'	1:AA:354:G:OP2	2.59	0.51
1:AA:507:C:N3	1:AA:508:U:C4	2.79	0.51
1:AA:551:U:H2'	1:AA:552:U:O5'	2.10	0.51
1:AA:1157:A:C4	1:AA:1181:G:N1	2.78	0.51
1:AA:1157:A:C5	1:AA:1181:G:C6	2.98	0.51
1:AA:1314:C:H41	19:AS:4:SER:HA	1.75	0.51
2:AB:72:THR:O	2:AB:73:LYS:CB	2.57	0.51
6:AF:98:GLU:CG	6:AF:99:ALA:N	2.72	0.51
15:AO:19:ALA:O	15:AO:20:ASN:CG	2.53	0.51
17:AQ:5:ILE:O	17:AQ:6:ARG:CB	2.58	0.51
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:191:A:H2'	22:BA:192:C:C6	2.46	0.51
22:BA:627:A:C6	22:BA:637:A:C8	2.99	0.51
22:BA:1173:U:C2'	22:BA:1174:U:O5'	2.59	0.51
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.25	0.51
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.11	0.51
22:BA:1916:A:H2'	22:BA:1917:U:O4'	2.10	0.51
22:BA:1923:U:C2	22:BA:1924:C:C6	2.99	0.51
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.92	0.51
22:BA:2691:C:C4	22:BA:2719:G:N2	2.79	0.51
57:BA:3291:HOH:O	33:BL:99:ASN:ND2	2.42	0.51
23:BB:37:C:C5	23:BB:38:C:C5	2.99	0.51
27:BF:132:VAL:HG22	27:BF:152:LEU:CB	2.40	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
30:BI:116:ASP:O	30:BI:117:MET:CB	2.58	0.51
1:CA:527:G:N1	1:CA:528:C:C5	2.79	0.51
1:CA:1160:G:O6	1:CA:1181:G:C6	2.64	0.51
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.46	0.51
1:CA:1431:A:C6	1:CA:1432:G:C6	2.98	0.51
11:CK:126:LYS:C	21:CU:34:ARG:NH2	2.69	0.51
15:CO:53:ARG:O	15:CO:56:LEU:N	2.44	0.51
16:CP:44:SER:O	16:CP:46:LYS:HG3	2.09	0.51
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.93	0.51
22:DA:55:G:C2	22:DA:56:A:C8	2.98	0.51
22:DA:315:G:H2'	22:DA:316:C:O4'	2.10	0.51
22:DA:483:A:C8	42:DU:45:HIS:CD2	2.98	0.51
22:DA:609:A:H2'	22:DA:610:C:O4'	2.10	0.51
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.11	0.51
22:DA:1843:C:H4'	24:DC:251:GLN:NE2	2.25	0.51
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.46	0.51
22:DA:2325:G:C6	22:DA:2326:C:N4	2.78	0.51
22:DA:2345:G:C6	22:DA:2347:C:N4	2.79	0.51
25:DD:150:GLN:HG3	25:DD:150:GLN:O	2.06	0.51
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.10	0.51
26:DE:52:VAL:HB	26:DE:74:LYS:HD3	1.93	0.51
27:DF:163:ASP:OD1	27:DF:163:ASP:N	2.43	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
31:DJ:140:LEU:HD12	31:DJ:141:ASP:N	2.24	0.51
1:AA:89:U:O2'	1:AA:90:C:H5'	2.10	0.51
1:AA:179:A:OP2	57:AA:1879:HOH:O	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:452:A:H2'	1:AA:453:G:C5'	2.39	0.51
1:AA:721:G:C6	1:AA:733:G:C2	2.98	0.51
2:AB:147:SER:O	2:AB:148:LEU:CG	2.59	0.51
22:BA:26:G:H1'	22:BA:514:A:H61	1.76	0.51
22:BA:533:G:OP1	38:BQ:24:TYR:O	2.29	0.51
22:BA:735:A:H3'	22:BA:736:C:C6	2.46	0.51
22:BA:747:U:C5	22:BA:2613:U:C5	2.99	0.51
22:BA:753:A:H2'	22:BA:754:U:H6	1.74	0.51
22:BA:1114:C:O2'	22:BA:1115:G:H5'	2.10	0.51
22:BA:1582:C:O2'	22:BA:1585:C:N3	2.39	0.51
22:BA:1718:G:C2	22:BA:1719:G:C8	2.99	0.51
22:BA:1921:G:N3	22:BA:1922:G:C8	2.77	0.51
22:BA:2151:U:H2'	22:BA:2152:G:N7	2.26	0.51
24:BC:212:ARG:HD2	24:BC:216:VAL:O	2.11	0.51
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.40	0.51
29:BH:91:PHE:HB3	1:CA:55:A:C4	2.45	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51
30:BI:82:LYS:O	30:BI:83:ALA:CB	2.58	0.51
32:BK:43:ILE:HD12	32:BK:56:ASP:HB2	1.92	0.51
32:BK:116:ILE:O	32:BK:118:LEU:O	2.28	0.51
33:BL:128:THR:O	33:BL:129:LYS:C	2.54	0.51
35:BN:70:THR:OG1	35:BN:71:ARG:N	2.42	0.51
42:BU:42:VAL:O	42:BU:60:GLU:HA	2.11	0.51
1:CA:573:A:C2	1:CA:574:A:C2	2.99	0.51
1:CA:987:G:C6	1:CA:988:G:C5	2.98	0.51
1:CA:1093:A:O2'	1:CA:1095:U:OP1	2.19	0.51
1:CA:1213:A:C5	1:CA:1215:G:C4	2.99	0.51
5:CE:50:TYR:O	5:CE:51:GLY:O	2.28	0.51
5:CE:133:PRO:HA	5:CE:136:VAL:CG1	2.41	0.51
9:CI:25:ASN:O	9:CI:27:LYS:N	2.42	0.51
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HG	1.92	0.51
22:DA:286:U:H2'	22:DA:287:G:C8	2.46	0.51
22:DA:447:A:H5'	22:DA:449:A:C5	2.45	0.51
22:DA:914:G:H5'	22:DA:915:C:OP2	2.11	0.51
22:DA:1053:C:C2	22:DA:1107:G:C2	2.98	0.51
22:DA:1307:A:H2'	22:DA:1308:A:O4'	2.11	0.51
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.30	0.51
22:DA:2267:A:H5"	22:DA:2268:A:H5'	1.92	0.51
23:DB:94:A:H2'	23:DB:95:U:O4'	2.09	0.51
30:DI:117:MET:HA	30:DI:117:MET:HE2	1.91	0.51
40:DS:73:LYS:CB	40:DS:106:VAL:HB	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:83:VAL:HG11	42:DU:94:ARG:CD	2.41	0.51
1:AA:198:G:C4	1:AA:199:A:C8	2.99	0.51
1:AA:1049:U:O2	1:AA:1201:A:C5	2.63	0.51
5:AE:77:ASN:O	5:AE:78:ASN:CB	2.59	0.51
8:AH:8:ALA:HB2	8:AH:77:ARG:CD	2.40	0.51
11:AK:38:GLN:O	11:AK:40:ASN:N	2.44	0.51
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.46	0.51
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.33	0.51
22:BA:1786:A:C4	22:BA:1938:A:C6	2.99	0.51
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.46	0.51
23:BB:114:C:H1'	36:BO:47:VAL:HG11	1.91	0.51
24:BC:11:PRO:C	24:BC:13:ARG:H	2.19	0.51
25:BD:101:PHE:O	25:BD:103:ASP:N	2.43	0.51
30:BI:16:GLY:HA3	30:BI:51:LYS:HB3	1.91	0.51
32:BK:21:CYS:HA	32:BK:41:ILE:HG22	1.93	0.51
36:BO:36:TYR:N	36:BO:36:TYR:CD1	2.78	0.51
38:BQ:50:ARG:O	38:BQ:54:LYS:CE	2.59	0.51
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.11	0.51
53:B5:83:LYS:HB3	53:B5:87:ALA:HB3	1.92	0.51
1:CA:309:A:O2'	1:CA:607:A:N1	2.37	0.51
1:CA:771:G:C4	1:CA:809:G:N2	2.79	0.51
1:CA:1042:A:H2'	1:CA:1043:G:C1'	2.41	0.51
1:CA:1211:U:O2'	1:CA:1212:U:P	2.69	0.51
3:CC:42:TYR:CZ	3:CC:90:VAL:HG21	2.46	0.51
3:CC:64:ILE:HG12	3:CC:66:VAL:HG23	1.92	0.51
5:CE:68:ARG:O	5:CE:71:MET:HE3	2.11	0.51
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.92	0.51
14:CN:54:ASP:HA	14:CN:59:ARG:HD3	1.92	0.51
15:CO:10:LYS:O	15:CO:14:GLU:HG3	2.11	0.51
17:CQ:11:ARG:HB2	17:CQ:57:ASP:O	2.10	0.51
18:CR:25:ASP:C	18:CR:27:ALA:N	2.67	0.51
21:CU:40:LYS:N	21:CU:41:PRO:CD	2.74	0.51
22:DA:200:U:C4	22:DA:248:G:C2	2.99	0.51
22:DA:570:G:C2'	22:DA:571:U:H5'	2.41	0.51
22:DA:1056:G:N1	22:DA:1102:C:OP2	2.44	0.51
22:DA:1378:A:C2'	22:DA:1380:G:N7	2.74	0.51
22:DA:1401:G:C5	22:DA:1402:U:C4	2.99	0.51
22:DA:1691:C:N4	22:DA:1692:U:O4	2.44	0.51
22:DA:2136:G:C2	22:DA:2156:G:H1'	2.46	0.51
28:DG:174:ALA:O	28:DG:175:LYS:O	2.27	0.51
36:DO:33:ARG:O	36:DO:34:HIS:CG	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:29:U:H5'	1:AA:296:U:OP1	2.11	0.51
1:AA:457:G:C6	1:AA:458:U:C2	2.99	0.51
1:AA:900:A:N1	1:AA:901:A:C2	2.79	0.51
1:AA:957:U:C2	1:AA:959:A:OP2	2.64	0.51
1:AA:1031:C:HO2'	1:AA:1032:G:P	2.30	0.51
1:AA:1057:G:O3'	3:AC:197:GLY:HA3	2.11	0.51
2:AB:79:ALA:C	2:AB:82:ASP:OD2	2.54	0.51
2:AB:133:GLU:O	2:AB:137:ARG:N	2.44	0.51
2:AB:149:GLY:O	2:AB:151:ILE:N	2.43	0.51
4:AD:160:GLU:O	4:AD:162:ALA:N	2.44	0.51
6:AF:79:ARG:NE	6:AF:79:ARG:HA	2.26	0.51
22:BA:593:U:H2'	22:BA:594:U:C6	2.46	0.51
22:BA:1115:G:N3	22:BA:1116:G:C8	2.78	0.51
22:BA:1441:G:H2'	22:BA:1442:U:H6	1.76	0.51
22:BA:1789:A:P	24:BC:221:ARG:HH11	2.34	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.93	0.51
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.46	0.51
40:BS:96:ILE:CD1	40:BS:98:LYS:CG	2.89	0.51
1:CA:254:G:OP1	17:CQ:69:LYS:O	2.28	0.51
1:CA:1093:A:C5	1:CA:1095:U:O4'	2.63	0.51
1:CA:1190:G:H5'	3:CC:176:HIS:CE1	2.46	0.51
1:CA:1379:G:N2	1:CA:1381:U:O4	2.40	0.51
2:CB:123:ASP:O	2:CB:124:GLY:C	2.54	0.51
7:CG:118:LEU:O	7:CG:122:ASN:ND2	2.44	0.51
12:CL:61:PHE:N	12:CL:61:PHE:CD1	2.79	0.51
22:DA:200:U:O4	22:DA:248:G:C2	2.63	0.51
22:DA:204:A:O4'	22:DA:206:U:C6	2.63	0.51
22:DA:297:G:H5"	42:DU:85:PHE:CB	2.41	0.51
22:DA:537:G:C6	22:DA:555:G:C2	2.98	0.51
22:DA:563:A:H1'	22:DA:2018:G:N2	2.26	0.51
22:DA:984:A:H5"	22:DA:985:C:OP2	2.11	0.51
22:DA:1029:A:N1	22:DA:2465:C:O2'	2.43	0.51
22:DA:1733:G:C5	22:DA:1734:G:C8	2.99	0.51
22:DA:2058:A:C6	22:DA:2059:A:N6	2.79	0.51
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.45	0.51
23:DB:14:U:OP2	23:DB:70:C:O2'	2.29	0.51
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.93	0.51
32:DK:34:GLY:O	32:DK:35:VAL:C	2.53	0.51
39:DR:66:HIS:CG	39:DR:94:THR:HG23	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.26	0.51
46:DY:1:MET:N	46:DY:4:LYS:HD3	2.26	0.51
1:AA:920:U:H2'	1:AA:921:U:C6	2.46	0.51
1:AA:1151:A:C4	1:AA:1152:A:N7	2.79	0.51
1:AA:1277:C:H1'	1:AA:1282:C:O2	2.11	0.51
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.11	0.51
2:AB:217:VAL:O	2:AB:220:THR:HG22	2.10	0.51
3:AC:88:ARG:HG3	3:AC:99:ALA:O	2.10	0.51
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.74	0.51
13:AM:64:VAL:O	13:AM:64:VAL:HG12	2.11	0.51
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.44	0.51
22:BA:612:G:H2'	22:BA:614:A:C8	2.46	0.51
22:BA:1734:G:N3	22:BA:1735:A:C8	2.79	0.51
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.11	0.51
22:BA:2116:G:C6	22:BA:2171:A:N6	2.79	0.51
22:BA:2127:G:C4'	22:BA:2128:G:OP1	2.57	0.51
22:BA:2592:G:N7	57:BA:3793:HOH:O	2.35	0.51
26:BE:46:GLN:O	26:BE:88:ARG:NH1	2.44	0.51
43:BV:36:ALA:O	43:BV:93:ARG:NH2	2.41	0.51
1:CA:76:G:N2	1:CA:95:C:N3	2.59	0.51
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.46	0.51
1:CA:1317:C:O2'	14:CN:49:GLN:HG2	2.10	0.51
2:CB:132:LYS:O	2:CB:136:MET:HB3	2.10	0.51
5:CE:137:VAL:O	5:CE:138:ARG:HB3	2.06	0.51
5:CE:155:ALA:HB1	8:CH:66:PHE:CE2	2.46	0.51
9:CI:91:ASP:OD1	9:CI:93:SER:N	2.42	0.51
22:DA:102:U:C2	46:DY:2:LYS:HE2	2.46	0.51
22:DA:116:C:C4	22:DA:117:G:N7	2.78	0.51
22:DA:121:G:H1'	22:DA:131:A:N1	2.26	0.51
22:DA:222:A:H3'	22:DA:421:C:H5'	1.93	0.51
22:DA:491:G:C6	22:DA:492:A:C6	2.99	0.51
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.58	0.51
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.41	0.51
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.59	0.51
22:DA:2159:G:H2'	22:DA:2160:C:C6	2.46	0.51
22:DA:2291:U:OP1	22:DA:2380:C:O2'	2.25	0.51
22:DA:2781:A:H5"	22:DA:2782:G:O5'	2.10	0.51
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.46	0.51
23:DB:7:G:C5'	36:DO:29:HIS:CE1	2.94	0.51
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.41	0.51
32:DK:113:MET:SD	32:DK:116:ILE:HD11	2.51	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:55:ILE:O	40:DS:58:ALA:HB3	2.11	0.51
1:AA:8:A:C5	4:AD:206:LYS:HB3	2.45	0.51
1:AA:41:G:H2'	1:AA:42:G:C8	2.45	0.51
1:AA:188:C:O2	1:AA:188:C:H2'	2.10	0.51
1:AA:702:A:H3'	1:AA:703:G:H5'	1.92	0.51
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.46	0.51
4:AD:151:LYS:HA	4:AD:178:MET:HE1	1.93	0.51
4:AD:166:GLU:O	4:AD:167:LYS:HB2	2.10	0.51
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.40	0.51
12:AL:101:ALA:O	12:AL:102:LEU:C	2.54	0.51
16:AP:38:PHE:CD1	16:AP:38:PHE:C	2.89	0.51
22:BA:1356:G:C2	22:BA:1357:C:C2	2.99	0.51
22:BA:1363:C:H2'	22:BA:1364:G:H8	1.76	0.51
22:BA:1909:C:H5'	22:BA:1910:G:OP2	2.10	0.51
22:BA:2071:A:H2'	22:BA:2072:C:C6	2.46	0.51
22:BA:2192:U:H2'	22:BA:2193:G:O4'	2.10	0.51
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.74	0.51
23:BB:90:C:H2'	23:BB:91:C:O5'	2.11	0.51
24:BC:154:LEU:HD23	24:BC:154:LEU:N	2.26	0.51
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.51
31:BJ:38:GLY:O	31:BJ:44:TYR:HB2	2.10	0.51
35:BN:52:ILE:HG21	35:BN:94:TYR:CD2	2.46	0.51
37:BP:31:TRP:CD2	37:BP:40:LEU:HD12	2.46	0.51
38:BQ:109:LEU:HD11	39:BR:40:MET:HE1	1.91	0.51
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.41	0.51
45:BX:78:TYR:OXT	45:BX:78:TYR:CG	2.64	0.51
47:BZ:40:ASP:CG	47:BZ:45:ARG:HH11	2.19	0.51
1:CA:158:G:C6	1:CA:159:G:C5	2.99	0.51
1:CA:495:A:N1	1:CA:496:A:N6	2.59	0.51
1:CA:547:A:P	57:CA:1775:HOH:O	2.69	0.51
1:CA:597:G:N7	1:CA:598:U:C5	2.79	0.51
1:CA:773:G:N3	1:CA:807:A:C2	2.78	0.51
1:CA:1070:U:C2	1:CA:1071:C:C5	2.98	0.51
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.11	0.51
2:CB:16:PHE:N	2:CB:16:PHE:CD1	2.79	0.51
4:CD:12:SER:HA	4:CD:19:LEU:HD12	1.92	0.51
12:CL:92:GLY:O	12:CL:94:ARG:HG2	2.11	0.51
15:CO:52:SER:O	15:CO:55:GLY:N	2.44	0.51
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.11	0.51
22:DA:118:A:N7	22:DA:119:A:C8	2.78	0.51
22:DA:1355:G:C2	22:DA:1356:G:C8	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1576:U:O2'	22:DA:1577:C:H5'	2.11	0.51
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.46	0.51
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.10	0.51
22:DA:2308:G:H5"	22:DA:2309:A:OP2	2.10	0.51
22:DA:2849:U:OP2	37:DP:93:ARG:NH2	2.44	0.51
23:DB:64:G:H2'	23:DB:65:U:C6	2.46	0.51
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.92	0.51
1:AA:60:A:N1	1:AA:107:G:O2'	2.42	0.50
1:AA:339:C:H2'	1:AA:340:U:H6	1.76	0.50
1:AA:375:U:C4	1:AA:376:G:N7	2.79	0.50
1:AA:694:A:N1	1:AA:787:A:O2'	2.44	0.50
1:AA:1227:A:C2'	1:AA:1228:C:O5'	2.58	0.50
1:AA:1461:G:C5	1:AA:1462:C:C5	2.99	0.50
2:AB:193:PRO:O	2:AB:195:GLY:N	2.39	0.50
4:AD:130:VAL:HG11	4:AD:135:TYR:CD2	2.46	0.50
7:AG:113:ASP:HB2	7:AG:119:ARG:HG3	1.93	0.50
9:AI:58:VAL:O	9:AI:59:GLU:HG2	2.11	0.50
12:AL:94:ARG:HB2	12:AL:95:TYR:CE1	2.45	0.50
22:BA:688:U:OP2	50:B2:2:LYS:NZ	2.44	0.50
22:BA:870:U:C4	22:BA:871:U:C5	2.99	0.50
22:BA:1208:C:C4	22:BA:1209:U:C4	2.99	0.50
22:BA:1327:A:N6	22:BA:1328:A:C2	2.79	0.50
22:BA:1502:A:C2	22:BA:1503:A:C4	2.99	0.50
22:BA:1916:A:H2'	22:BA:1917:U:H4'	1.93	0.50
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.47	0.50
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.42	0.50
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.46	0.50
24:BC:225:MET:HE3	24:BC:229:ASP:HB3	1.93	0.50
27:BF:136:ILE:N	27:BF:136:ILE:HD12	2.26	0.50
28:BG:2:SER:C	28:BG:4:VAL:N	2.68	0.50
29:BH:14:SER:HG	29:BH:17:ASP:CG	2.17	0.50
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.50
35:BN:77:ALA:O	35:BN:79:LEU:O	2.29	0.50
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.36	0.50
39:BR:62:GLU:O	39:BR:64:VAL:CG1	2.58	0.50
41:BT:41:ALA:O	41:BT:42:GLU:C	2.54	0.50
49:B1:33:LYS:HA	49:B1:52:ALA:HB3	1.92	0.50
1:CA:566:G:O6	57:CA:1730:HOH:O	2.19	0.50
1:CA:734:G:C2	1:CA:735:C:C6	2.99	0.50
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.11	0.50
2:CB:68:LEU:HD13	2:CB:161:LEU:HD13	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.92	0.50
4:CD:124:MET:HG3	4:CD:146:ARG:HG2	1.93	0.50
6:CF:29:ILE:HG22	6:CF:34:GLY:O	2.10	0.50
16:CP:36:VAL:O	16:CP:36:VAL:HG13	2.10	0.50
17:CQ:57:ASP:HB3	17:CQ:80:GLU:O	2.11	0.50
22:DA:13:A:N3	22:DA:14:A:N6	2.58	0.50
22:DA:1288:G:C8	22:DA:1327:A:C6	2.99	0.50
22:DA:1607:C:O2	22:DA:1621:U:C5	2.64	0.50
22:DA:1645:G:H4'	22:DA:1646:C:C6	2.46	0.50
22:DA:2199:A:C4	22:DA:2225:A:N1	2.80	0.50
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.93	0.50
25:DD:90:PHE:CE2	25:DD:96:ILE:HD11	2.46	0.50
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.46	0.50
27:DF:122:PHE:O	27:DF:123:ASP:C	2.54	0.50
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.10	0.50
35:DN:1:MET:H3	35:DN:1:MET:HE3	1.76	0.50
46:DY:60:LYS:O	46:DY:62:GLY:N	2.42	0.50
1:AA:212:G:C2	1:AA:213:G:C4	2.99	0.50
1:AA:453:G:H2'	1:AA:454:G:C8	2.47	0.50
1:AA:1059:C:C2	1:AA:1060:U:C6	3.00	0.50
1:AA:1167:A:N7	1:AA:1169:A:C5	2.78	0.50
1:AA:1302:C:C4	13:AM:17:ILE:HD13	2.47	0.50
1:AA:1315:U:C5	1:AA:1316:G:C5	2.99	0.50
2:AB:78:GLU:C	2:AB:80:VAL:H	2.19	0.50
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.25	0.50
7:AG:50:LEU:O	7:AG:50:LEU:HD13	2.12	0.50
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.11	0.50
20:AT:3:ASN:O	20:AT:4:ILE:C	2.54	0.50
22:BA:322:A:H4'	22:BA:323:C:OP2	2.12	0.50
22:BA:360:U:H3'	22:BA:361:G:C8	2.46	0.50
22:BA:796:C:H2'	22:BA:797:G:C8	2.47	0.50
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.46	0.50
22:BA:1083:U:O2	22:BA:1086:A:C2	2.64	0.50
22:BA:1090:A:C2'	22:BA:1091:G:H5'	2.41	0.50
22:BA:1936:A:C2	22:BA:1945:G:C8	2.99	0.50
27:BF:107:ALA:N	27:BF:109:PRO:HD2	2.26	0.50
27:BF:112:ARG:O	27:BF:113:ASP:HB2	2.12	0.50
30:BI:50:GLU:C	30:BI:51:LYS:HD3	2.37	0.50
32:BK:1:MET:HE3	32:BK:32:TYR:CZ	2.46	0.50
33:BL:62:PRO:CG	51:B3:25:LYS:HD3	2.41	0.50
41:BT:11:LEU:HD21	41:BT:46:ALA:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:74:ARG:NH2	45:BX:76:GLU:HG3	2.26	0.50
1:CA:209:U:O2	1:CA:209:U:H2'	2.12	0.50
1:CA:375:U:C4	1:CA:376:G:N7	2.79	0.50
1:CA:502:A:H2'	1:CA:503:C:O4'	2.11	0.50
1:CA:736:C:H2'	1:CA:737:C:C6	2.46	0.50
1:CA:803:G:OP1	57:CA:1801:HOH:O	2.18	0.50
7:CG:2:PRO:O	7:CG:3:ARG:C	2.54	0.50
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.45	0.50
21:CU:4:ILE:HG23	21:CU:20:LYS:HZ1	1.76	0.50
22:DA:572:A:OP2	39:DR:80:ARG:NH2	2.44	0.50
22:DA:933:A:H5'	22:DA:934:U:OP2	2.11	0.50
22:DA:1359:A:N7	22:DA:1373:A:C2	2.79	0.50
22:DA:2093:G:C5	22:DA:2225:A:C8	2.99	0.50
22:DA:2543:G:N3	22:DA:2765:A:H2'	2.26	0.50
24:DC:158:ALA:HB1	24:DC:197:ASN:O	2.11	0.50
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.93	0.50
35:DN:1:MET:HE2	35:DN:1:MET:N	2.26	0.50
39:DR:80:ARG:O	39:DR:82:HIS:N	2.41	0.50
41:DT:4:GLU:HA	41:DT:7:LEU:HB2	1.92	0.50
51:D3:52:LYS:O	51:D3:54:ASP:N	2.44	0.50
1:AA:32:A:OP1	1:AA:398:U:H1'	2.11	0.50
1:AA:142:G:H3'	1:AA:143:A:C8	2.46	0.50
1:AA:1055:A:C6	1:AA:1206:G:C5	2.98	0.50
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.11	0.50
1:AA:1525:G:OP1	11:AK:122:ARG:NH2	2.39	0.50
2:AB:35:ARG:HB3	2:AB:40:ILE:HD11	1.93	0.50
2:AB:118:GLU:HA	2:AB:121:SER:HB2	1.93	0.50
2:AB:208:ARG:O	2:AB:210:VAL:N	2.44	0.50
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.46	0.50
4:AD:165:ARG:O	4:AD:167:LYS:N	2.45	0.50
10:AJ:52:LEU:CB	14:AN:81:ARG:HE	2.24	0.50
17:AQ:46:VAL:HG13	17:AQ:73:TRP:O	2.10	0.50
21:AU:14:VAL:O	21:AU:16:LEU:HG	2.11	0.50
22:BA:608:A:C6	22:BA:609:A:C6	3.00	0.50
22:BA:669:G:C6	22:BA:801:G:C6	2.99	0.50
22:BA:784:G:H5'	22:BA:785:G:OP1	2.11	0.50
22:BA:1885:A:C5	22:BA:1886:U:C5	2.99	0.50
22:BA:2191:A:N1	22:BA:2192:U:C4	2.79	0.50
23:BB:30:C:OP1	36:BO:3:LYS:NZ	2.44	0.50
27:BF:36:LEU:HD11	27:BF:99:PHE:CZ	2.47	0.50
38:BQ:78:LYS:O	38:BQ:81:ASN:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:76:G:C2	1:CA:95:C:N3	2.79	0.50
1:CA:207:C:O2	1:CA:207:C:C2'	2.59	0.50
1:CA:386:C:N4	1:CA:387:U:O4	2.43	0.50
1:CA:755:G:C2	1:CA:756:C:C5	3.00	0.50
1:CA:991:U:C4	1:CA:1212:U:O4'	2.64	0.50
1:CA:998:C:H2'	1:CA:999:C:C6	2.46	0.50
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.26	0.50
2:CB:128:LYS:O	2:CB:129:LEU:HB2	2.11	0.50
4:CD:29:ASP:C	4:CD:31:LYS:N	2.66	0.50
5:CE:96:MET:CE	5:CE:111:MET:HE3	2.39	0.50
5:CE:99:ALA:O	5:CE:100:SER:C	2.54	0.50
5:CE:147:MET:HG2	5:CE:147:MET:O	2.10	0.50
22:DA:222:A:C8	22:DA:224:U:C5	2.99	0.50
22:DA:1304:A:C6	22:DA:1305:C:C5	2.99	0.50
22:DA:1415:U:C2	22:DA:1588:G:C2	2.99	0.50
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.94	0.50
22:DA:2093:G:O2'	29:DH:25:TYR:CB	2.59	0.50
22:DA:2415:G:C2	22:DA:2416:C:C2	2.99	0.50
23:DB:96:G:C6	23:DB:97:C:C4	2.99	0.50
28:DG:45:HIS:O	28:DG:46:ALA:HB3	2.11	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.11	0.50
31:DJ:94:ALA:O	31:DJ:95:ARG:C	2.54	0.50
35:DN:12:ARG:O	35:DN:17:ARG:NH2	2.44	0.50
35:DN:114:GLU:OE2	35:DN:118:ARG:HD2	2.11	0.50
45:DX:10:LYS:HE3	45:DX:54:LYS:CD	2.42	0.50
45:DX:43:GLU:O	45:DX:44:LYS:C	2.54	0.50
50:D2:18:PHE:O	50:D2:20:ALA:N	2.45	0.50
1:AA:39:G:N7	1:AA:547:A:H8	2.09	0.50
1:AA:579:A:O2'	15:AO:54:ARG:NH1	2.45	0.50
1:AA:701:U:H4'	1:AA:702:A:O5'	2.12	0.50
1:AA:1107:C:C4	1:AA:1108:G:N7	2.80	0.50
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	1.94	0.50
11:AK:102:ALA:O	11:AK:103:ALA:C	2.54	0.50
22:BA:669:G:C2'	22:BA:669:G:N3	2.73	0.50
22:BA:1842:G:C5	22:BA:1843:C:C5	2.99	0.50
22:BA:2018:G:O2'	22:BA:2019:A:H5'	2.11	0.50
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.46	0.50
24:BC:174:LEU:HD13	24:BC:174:LEU:N	2.27	0.50
28:BG:150:ALA:C	28:BG:152:ARG:H	2.20	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
30:BI:39:CYS:CA	30:BI:42:PHE:HB3	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:29:THR:O	39:BR:29:THR:HG22	2.12	0.50
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	2.10	0.50
1:CA:135:C:O2	16:CP:1:MET:HB2	2.11	0.50
1:CA:734:G:N3	1:CA:735:C:C6	2.79	0.50
2:CB:50:PHE:CD1	2:CB:54:LEU:HD23	2.46	0.50
2:CB:83:ALA:O	2:CB:86:SER:OG	2.24	0.50
4:CD:119:SER:O	4:CD:131:ASN:OD1	2.30	0.50
5:CE:102:GLY:O	5:CE:104:GLY:CA	2.59	0.50
6:CF:88:MET:CE	18:CR:64:TYR:CD2	2.93	0.50
22:DA:158:U:O4	22:DA:159:G:C6	2.64	0.50
22:DA:510:C:OP1	57:DA:3765:HOH:O	2.19	0.50
22:DA:585:G:H2'	22:DA:586:A:N7	2.26	0.50
22:DA:1027:A:C6	22:DA:1126:A:N3	2.79	0.50
22:DA:1343:G:N2	22:DA:1405:U:C2	2.80	0.50
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.46	0.50
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.41	0.50
22:DA:2037:A:N6	22:DA:2038:G:O6	2.45	0.50
22:DA:2415:G:C5	22:DA:2416:C:C5	3.00	0.50
22:DA:2469:A:O2'	34:DM:55:ARG:CZ	2.60	0.50
23:DB:58:A:H2'	23:DB:59:A:O4'	2.12	0.50
24:DC:210:ALA:HA	24:DC:213:TRP:NE1	2.26	0.50
35:DN:28:LEU:O	35:DN:32:GLU:HA	2.12	0.50
1:AA:69:G:O6	1:AA:98:A:N6	2.45	0.50
1:AA:212:G:C2	1:AA:213:G:C5	2.99	0.50
1:AA:485:U:O2	1:AA:485:U:O4'	2.29	0.50
1:AA:723:U:H5"	21:AU:49:LYS:HG2	1.93	0.50
1:AA:829:G:C6	1:AA:858:G:C2	2.99	0.50
1:AA:880:C:OP2	12:AL:3:THR:HG21	2.11	0.50
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.11	0.50
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.12	0.50
1:AA:1407:C:O2'	22:BA:1912:A:C6	2.60	0.50
1:AA:1478:U:H2'	1:AA:1479:C:H6	1.76	0.50
4:AD:35:GLU:O	4:AD:38:PRO:HD3	2.12	0.50
4:AD:161:LEU:HD22	4:AD:161:LEU:N	2.27	0.50
7:AG:57:SER:OG	7:AG:58:GLU:N	2.43	0.50
13:AM:6:GLY:C	13:AM:8:ASN:H	2.20	0.50
20:AT:5:LYS:O	20:AT:6:SER:C	2.55	0.50
21:AU:14:VAL:CG1	21:AU:16:LEU:CD2	2.90	0.50
22:BA:1525:A:C5	22:BA:1526:C:C5	2.99	0.50
22:BA:2166:U:O4	22:BA:2170:A:N7	2.45	0.50
22:BA:2593:U:C2	22:BA:2594:C:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:149:ILE:HD11	26:BE:172:ALA:CA	2.41	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
39:BR:71:LYS:HA	39:BR:90:ARG:HG2	1.92	0.50
45:BX:78:TYR:OXT	45:BX:78:TYR:CD1	2.65	0.50
48:B0:55:ILE:O	48:B0:56:ALA:HB3	2.12	0.50
1:CA:8:A:N6	4:CD:206:LYS:HB3	2.26	0.50
1:CA:1380:U:C5	7:CG:3:ARG:HA	2.47	0.50
4:CD:161:LEU:HD23	4:CD:162:ALA:N	2.26	0.50
5:CE:125:ALA:O	5:CE:126:LYS:HB3	2.11	0.50
10:CJ:6:ILE:HD11	10:CJ:79:PRO:HA	1.93	0.50
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.12	0.50
20:CT:57:ILE:O	20:CT:61:GLN:HG2	2.12	0.50
22:DA:269:C:N3	22:DA:270:A:C8	2.79	0.50
22:DA:699:A:H2'	22:DA:700:G:O4'	2.11	0.50
22:DA:740:C:H5'	22:DA:1784:A:O2'	2.11	0.50
22:DA:760:G:C6	22:DA:761:A:C4	3.00	0.50
22:DA:980:A:C4	22:DA:1136:G:O4'	2.63	0.50
22:DA:1323:C:N4	22:DA:1324:G:C6	2.78	0.50
22:DA:1363:C:O2'	22:DA:1809:A:N3	2.42	0.50
22:DA:1544:A:C6	22:DA:1545:A:N1	2.79	0.50
22:DA:1677:A:H5"	57:DA:3433:HOH:O	2.11	0.50
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.76	0.50
22:DA:1833:C:N4	22:DA:1834:U:O4	2.45	0.50
22:DA:2094:A:H5'	29:DH:25:TYR:CD1	2.45	0.50
22:DA:2373:G:C6	22:DA:2374:C:N4	2.80	0.50
22:DA:2440:C:C4	22:DA:2441:U:H1'	2.46	0.50
55:DA:3001:VIR:H352	55:DA:3001:VIR:C31	2.32	0.50
42:DU:96:PHE:CZ	42:DU:103:ILE:CG1	2.95	0.50
1:AA:582:C:C4	1:AA:583:A:N7	2.80	0.50
1:AA:721:G:H4'	1:AA:722:G:C5'	2.42	0.50
1:AA:828:U:H2'	1:AA:829:G:O5'	2.11	0.50
1:AA:998:C:H2'	1:AA:999:C:C6	2.47	0.50
1:AA:1008:U:H2'	1:AA:1009:U:C6	2.47	0.50
1:AA:1157:A:N6	1:AA:1180:A:N7	2.60	0.50
1:AA:1163:A:H2'	1:AA:1164:G:C8	2.46	0.50
1:AA:1329:A:H5"	13:AM:26:GLY:N	2.26	0.50
2:AB:132:LYS:O	2:AB:136:MET:HB2	2.12	0.50
8:AH:10:MET:O	8:AH:11:LEU:C	2.54	0.50
9:AI:43:THR:O	9:AI:44:ALA:HB3	2.12	0.50
19:AS:5:LEU:O	19:AS:6:LYS:HD2	2.11	0.50
21:AU:37:PHE:HA	21:AU:40:LYS:HE3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:487:C:O2	40:BS:53:SER:OG	2.29	0.50
22:BA:571:U:C4	22:BA:575:A:C4	3.00	0.50
22:BA:1022:G:N7	31:BJ:68:LYS:HE2	2.27	0.50
22:BA:1587:G:C4	22:BA:1588:G:C8	3.00	0.50
22:BA:1866:A:C2	22:BA:1876:A:C4	2.99	0.50
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.94	0.50
22:BA:2023:C:O2'	22:BA:2024:G:H5'	2.11	0.50
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.12	0.50
22:BA:2176:A:C6	22:BA:2177:C:N4	2.80	0.50
25:BD:28:GLU:OE2	25:BD:30:GLU:HG3	2.12	0.50
27:BF:8:TYR:HA	27:BF:12:VAL:HG23	1.92	0.50
27:BF:119:ALA:HB2	27:BF:177:PHE:CD1	2.47	0.50
36:BO:101:GLY:O	36:BO:103:VAL:N	2.45	0.50
53:B5:65:LEU:HD11	53:B5:191:ARG:CA	2.41	0.50
1:CA:1162:C:C2	1:CA:1175:G:C2	3.00	0.50
1:CA:1317:C:N4	1:CA:1318:A:N3	2.60	0.50
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.25	0.50
1:CA:1422:G:C2	1:CA:1423:G:C8	2.99	0.50
1:CA:1437:A:C2	1:CA:1465:A:C2	3.00	0.50
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.46	0.50
2:CB:68:LEU:HD12	2:CB:158:PRO:HG2	1.92	0.50
4:CD:116:GLN:HG3	4:CD:120:HIS:CE1	2.46	0.50
8:CH:126:ILE:N	8:CH:126:ILE:HD12	2.26	0.50
20:CT:25:ARG:O	20:CT:29:ARG:HG3	2.10	0.50
22:DA:1305:C:N4	22:DA:1607:C:OP2	2.44	0.50
22:DA:2785:C:H2'	22:DA:2786:U:O4'	2.12	0.50
22:DA:2849:U:OP2	37:DP:93:ARG:NE	2.45	0.50
25:DD:84:LEU:HD13	25:DD:88:GLU:HB2	1.94	0.50
27:DF:126:GLY:O	27:DF:158:THR:CG2	2.60	0.50
28:DG:12:PRO:HD2	28:DG:15:VAL:HG21	1.94	0.50
28:DG:96:ALA:N	28:DG:128:GLN:O	2.45	0.50
28:DG:169:VAL:O	28:DG:169:VAL:HG12	2.11	0.50
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.50
30:DI:10:LYS:HB2	30:DI:56:PRO:CB	2.42	0.50
31:DJ:81:ILE:HG12	31:DJ:82:GLY:N	2.27	0.50
40:DS:49:LYS:O	40:DS:53:SER:HB2	2.12	0.50
43:DV:38:LEU:HD23	43:DV:40:ILE:CD1	2.42	0.50
43:DV:51:GLN:HA	43:DV:56:PHE:HB2	1.93	0.50
50:D2:12:ARG:NH2	50:D2:44:VAL:CG1	2.75	0.50
51:D3:52:LYS:O	51:D3:53:GLY:C	2.55	0.50
1:AA:211:G:N2	1:AA:212:G:C8	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:819:A:N7	1:AA:1529:G:C2	2.80	0.50
1:AA:937:A:C2	1:AA:1379:G:O6	2.65	0.50
1:AA:1324:A:C6	1:AA:1325:C:C4	3.00	0.50
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.73	0.50
4:AD:83:LYS:HD3	4:AD:83:LYS:C	2.37	0.50
4:AD:138:SER:N	4:AD:141:ASP:OD2	2.43	0.50
5:AE:50:TYR:CE1	5:AE:134:ILE:HD11	2.47	0.50
8:AH:42:GLU:OE1	8:AH:42:GLU:CA	2.60	0.50
16:AP:67:ILE:HG23	16:AP:71:VAL:HG12	1.94	0.50
20:AT:33:LYS:O	20:AT:34:LYS:C	2.54	0.50
22:BA:545:U:H1'	22:BA:548:G:OP2	2.12	0.50
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.73	0.50
27:BF:80:ARG:HG2	27:BF:81:GLN:N	2.27	0.50
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.42	0.50
41:BT:57:VAL:CG2	41:BT:58:VAL:N	2.74	0.50
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.59	0.50
1:CA:756:C:C2	1:CA:757:U:C6	3.00	0.50
1:CA:805:C:H2'	1:CA:806:C:H6	1.77	0.50
1:CA:1027:C:N4	1:CA:1034:G:N1	2.59	0.50
2:CB:102:THR:O	2:CB:102:THR:HG23	2.11	0.50
4:CD:31:LYS:O	4:CD:32:CYS:HB3	2.10	0.50
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	1.93	0.50
20:CT:69:LYS:CB	20:CT:70:ASN:OD1	2.59	0.50
21:CU:15:ALA:O	21:CU:16:LEU:C	2.54	0.50
22:DA:851:C:O2'	47:DZ:43:ALA:O	2.29	0.50
22:DA:1224:U:C4	22:DA:1225:G:C6	2.99	0.50
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.10	0.50
22:DA:1464:G:C4	22:DA:1465:G:C8	3.00	0.50
22:DA:1471:G:H2'	22:DA:1472:C:C6	2.46	0.50
22:DA:1605:C:H2'	22:DA:1606:C:H5'	1.93	0.50
22:DA:1958:C:P	57:DA:3729:HOH:O	2.69	0.50
24:DC:30:PHE:CE2	24:DC:32:PRO:HG2	2.46	0.50
32:DK:31:ARG:HB3	32:DK:32:TYR:CE1	2.47	0.50
32:DK:99:ILE:HD13	32:DK:118:LEU:HD12	1.94	0.50
33:DL:101:ILE:O	33:DL:105:ILE:HG13	2.12	0.50
33:DL:117:THR:HG22	33:DL:118:THR:N	2.26	0.50
42:DU:12:ILE:HG13	42:DU:21:LYS:O	2.11	0.50
1:AA:582:C:C2	1:AA:583:A:C8	3.00	0.50
1:AA:1406:U:C6	1:AA:1407:C:C5	3.00	0.50
2:AB:51:ASN:O	2:AB:52:GLU:HB2	2.12	0.50
2:AB:95:ARG:NH1	2:AB:97:LEU:HA	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:103:ASN:O	2:AB:104:TRP:C	2.54	0.50
6:AF:17:GLN:OE1	6:AF:24:ARG:NH2	2.45	0.50
7:AG:80:VAL:O	7:AG:81:GLY:C	2.54	0.50
12:AL:3:THR:HG22	12:AL:5:ASN:N	2.26	0.50
12:AL:3:THR:HB	12:AL:6:GLN:HG3	1.93	0.50
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.27	0.50
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.37	0.50
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.75	0.50
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.27	0.50
19:AS:51:VAL:HG22	19:AS:71:LEU:CD1	2.41	0.50
22:BA:142:A:N7	22:BA:143:C:C4	2.80	0.50
22:BA:480:A:H2'	22:BA:481:G:OP1	2.12	0.50
22:BA:1176:U:OP1	22:BA:1176:U:H4'	2.11	0.50
22:BA:2419:U:OP1	51:B3:41:LYS:HE2	2.12	0.50
23:BB:13:G:H21	23:BB:16:G:H1'	1.76	0.50
24:BC:123:ALA:O	24:BC:125:LYS:N	2.45	0.50
24:BC:141:VAL:HG13	24:BC:191:THR:O	2.11	0.50
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.50
34:BM:55:ARG:CZ	34:BM:55:ARG:CB	2.90	0.50
39:BR:50:GLY:C	39:BR:51:VAL:O	2.50	0.50
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.59	0.50
1:CA:160:A:C6	1:CA:346:G:O6	2.65	0.50
1:CA:540:G:C6	1:CA:541:G:C5	2.99	0.50
1:CA:552:U:H4'	12:CL:83:ARG:CG	2.42	0.50
1:CA:1160:G:HO2'	1:CA:1161:C:P	2.33	0.50
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.47	0.50
7:CG:93:PRO:O	7:CG:97:ASN:ND2	2.45	0.50
13:CM:91:HIS:HA	13:CM:109:ARG:HH21	1.77	0.50
17:CQ:47:HIS:HA	17:CQ:71:LYS:HE2	1.94	0.50
21:CU:24:GLU:HG3	21:CU:28:VAL:HG21	1.94	0.50
22:DA:82:U:O2	22:DA:83:A:C8	2.65	0.50
22:DA:218:A:C2	22:DA:219:A:C4	3.00	0.50
22:DA:396:G:H4'	45:DX:29:PHE:O	2.12	0.50
22:DA:404:A:C4'	22:DA:405:U:OP2	2.60	0.50
22:DA:528:A:C2	22:DA:2043:C:H5'	2.46	0.50
22:DA:1310:G:N2	22:DA:1605:C:C2	2.80	0.50
22:DA:1378:A:C4	22:DA:1380:G:N7	2.80	0.50
22:DA:1544:A:C6	22:DA:1545:A:C6	3.00	0.50
22:DA:1623:G:C2	22:DA:1624:U:C6	3.00	0.50
22:DA:2547:A:H2'	22:DA:2548:U:C6	2.47	0.50
22:DA:2734:A:C8	22:DA:2735:G:C8	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.70	0.50
30:DI:101:ILE:O	30:DI:102:SER:CB	2.59	0.50
30:DI:133:ALA:C	30:DI:138:LEU:HD12	2.37	0.50
39:DR:29:THR:O	39:DR:63:VAL:O	2.30	0.50
1:AA:206:C:H2'	1:AA:207:C:O4'	2.12	0.50
1:AA:1314:C:O2'	1:AA:1315:U:H5'	2.12	0.50
2:AB:18:HIS:O	2:AB:19:GLN:HB2	2.10	0.50
3:AC:97:VAL:HB	3:AC:98:PRO:CD	2.42	0.50
4:AD:3:ARG:CZ	4:AD:115:ARG:CD	2.89	0.50
12:AL:38:TYR:O	12:AL:39:THR:CG2	2.60	0.50
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.94	0.50
15:AO:46:HIS:O	15:AO:48:LYS:N	2.42	0.50
22:BA:86:G:C2	22:BA:97:C:C2	2.99	0.50
22:BA:142:A:H2'	22:BA:143:C:O4'	2.12	0.50
22:BA:508:A:H4'	22:BA:509:C:OP2	2.12	0.50
22:BA:1372:U:O2'	22:BA:1373:A:H5'	2.12	0.50
22:BA:1376:C:H2'	22:BA:1377:G:O4'	2.11	0.50
22:BA:1429:G:N2	22:BA:1430:G:C4	2.80	0.50
22:BA:2360:G:H1'	33:BL:60:ARG:HD3	1.93	0.50
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.93	0.50
23:BB:85:G:O2'	23:BB:86:G:H5'	2.12	0.50
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.11	0.50
26:BE:15:SER:N	26:BE:197:GLU:OE2	2.38	0.50
37:BP:93:ARG:O	37:BP:94:LYS:HB2	2.11	0.50
53:B5:65:LEU:HD11	53:B5:191:ARG:CB	2.42	0.50
1:CA:429:U:H4'	1:CA:430:A:OP1	2.11	0.50
1:CA:716:A:C2	1:CA:717:U:O2	2.65	0.50
1:CA:774:G:C5	1:CA:775:G:N7	2.79	0.50
1:CA:1240:U:OP2	7:CG:116:MET:HB3	2.12	0.50
1:CA:1279:G:OP1	10:CJ:9:ARG:NH2	2.45	0.50
2:CB:206:ALA:C	2:CB:208:ARG:N	2.70	0.50
4:CD:173:VAL:O	4:CD:174:ASP:HB3	2.11	0.50
6:CF:32:ALA:O	6:CF:33:GLU:C	2.55	0.50
6:CF:38:ARG:CG	6:CF:63:ASN:HB2	2.41	0.50
10:CJ:67:ILE:HG13	14:CN:96:LEU:HD13	1.94	0.50
11:CK:17:SER:OG	11:CK:18:ASP:N	2.45	0.50
15:CO:27:VAL:HG12	15:CO:28:GLN:N	2.26	0.50
22:DA:584:C:N4	22:DA:585:G:C6	2.80	0.50
22:DA:1082:U:OP1	30:DI:124:ALA:HB2	2.11	0.50
22:DA:1924:C:H2'	22:DA:1925:C:O4'	2.12	0.50
22:DA:2199:A:C4'	29:DH:28:ASN:HD21	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:83:PHE:CE2	28:DG:138:LYS:HB2	2.46	0.50
34:DM:59:ARG:O	34:DM:59:ARG:CD	2.60	0.50
1:AA:545:C:H5'	4:AD:69:GLU:HG3	1.94	0.49
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.24	0.49
3:AC:25:ASN:O	3:AC:26:THR:C	2.55	0.49
3:AC:71:ALA:O	3:AC:72:ARG:HG2	2.12	0.49
4:AD:153:SER:O	4:AD:154:ARG:C	2.55	0.49
4:AD:170:TRP:CD2	4:AD:186:PRO:HG3	2.47	0.49
5:AE:104:GLY:HA3	5:AE:122:ASN:HA	1.94	0.49
6:AF:64:VAL:HG12	6:AF:65:GLU:N	2.27	0.49
8:AH:11:LEU:HD12	8:AH:77:ARG:HG2	1.94	0.49
13:AM:40:ALA:O	13:AM:43:VAL:HG22	2.12	0.49
20:AT:54:MET:HA	20:AT:57:ILE:HG22	1.94	0.49
22:BA:567:U:C2'	22:BA:568:U:O5'	2.59	0.49
22:BA:964:C:O2'	22:BA:2273:A:N3	2.45	0.49
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.42	0.49
22:BA:1842:G:C6	22:BA:1843:C:C4	3.00	0.49
22:BA:2391:G:O2'	22:BA:2424:C:N4	2.42	0.49
22:BA:2583:G:H2'	22:BA:2584:U:O5'	2.11	0.49
22:BA:2756:U:OP2	52:B4:19:ARG:NE	2.45	0.49
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.47	0.49
32:BK:2:ILE:HG23	32:BK:6:THR:HG21	1.92	0.49
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.95	0.49
44:BW:46:HIS:CE1	44:BW:77:ARG:HD3	2.47	0.49
48:B0:10:ARG:HB2	48:B0:13:ARG:NH2	2.26	0.49
1:CA:355:C:C4	1:CA:356:A:N7	2.79	0.49
1:CA:811:C:C4	1:CA:812:G:C6	3.00	0.49
2:CB:81:LYS:HG2	2:CB:85:LEU:HD23	1.93	0.49
8:CH:18:GLN:NE2	8:CH:70:ALA:HB1	2.27	0.49
22:DA:53:A:N7	22:DA:54:G:C8	2.80	0.49
22:DA:479:A:H1'	22:DA:481:G:H5'	1.94	0.49
22:DA:1115:G:O2'	22:DA:1116:G:OP2	2.24	0.49
22:DA:1862:G:C2	22:DA:1881:C:C2	3.00	0.49
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.49
36:DO:64:TYR:O	36:DO:67:ASN:ND2	2.45	0.49
36:DO:74:VAL:O	36:DO:78:VAL:HG23	2.12	0.49
36:DO:117:PHE:CD1	36:DO:117:PHE:C	2.90	0.49
1:AA:114:U:O2'	1:AA:115:G:H5'	2.12	0.49
1:AA:141:G:C2	1:AA:142:G:H1'	2.47	0.49
1:AA:202:G:N2	1:AA:216:U:O2	2.44	0.49
1:AA:258:G:C4	1:AA:259:G:C8	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:792:A:H1'	1:AA:794:A:N7	2.27	0.49
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.94	0.49
1:AA:1504:G:OP2	1:AA:1507:A:O2'	2.28	0.49
4:AD:168:PRO:HG2	4:AD:171:LEU:HD11	1.95	0.49
4:AD:190:ASP:O	4:AD:191:LEU:HD12	2.11	0.49
6:AF:68:GLN:HA	6:AF:71:ILE:HG22	1.94	0.49
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.30	0.49
14:AN:43:ASN:O	14:AN:45:VAL:N	2.45	0.49
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	1.94	0.49
22:BA:304:U:H2'	22:BA:305:C:C6	2.46	0.49
22:BA:404:A:H1'	22:BA:405:U:OP2	2.12	0.49
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.47	0.49
22:BA:2727:A:H2'	22:BA:2728:U:H5'	1.94	0.49
24:BC:17:VAL:HB	24:BC:204:VAL:HG13	1.94	0.49
27:BF:119:ALA:HB1	27:BF:167:ARG:CD	2.43	0.49
30:BI:96:ASP:O	30:BI:98:VAL:HG23	2.12	0.49
44:BW:20:ARG:HD2	44:BW:20:ARG:N	2.26	0.49
1:CA:55:A:N7	1:CA:56:U:C5	2.80	0.49
1:CA:155:A:C2	1:CA:167:A:C5	3.00	0.49
1:CA:976:G:N2	1:CA:1363:A:C2	2.81	0.49
1:CA:1213:A:C6	1:CA:1215:G:N3	2.81	0.49
3:CC:145:GLY:O	3:CC:146:ALA:O	2.29	0.49
4:CD:196:ASN:HB3	4:CD:198:HIS:CD2	2.47	0.49
6:CF:13:ASP:C	6:CF:15:SER:H	2.20	0.49
18:CR:67:LEU:HD23	18:CR:67:LEU:N	2.27	0.49
22:DA:379:G:C6	22:DA:396:G:C6	2.99	0.49
22:DA:602:A:H2'	22:DA:655:A:N1	2.26	0.49
22:DA:681:G:C2	22:DA:682:G:C8	3.00	0.49
22:DA:952:G:C2	22:DA:966:G:C2	3.00	0.49
22:DA:964:C:O2'	22:DA:2273:A:N3	2.45	0.49
28:DG:118:PRO:HG3	28:DG:144:VAL:CG2	2.41	0.49
31:DJ:7:LYS:O	31:DJ:11:VAL:HG23	2.11	0.49
36:DO:53:THR:HG23	36:DO:74:VAL:HG21	1.94	0.49
46:DY:36:GLN:O	46:DY:37:LEU:C	2.56	0.49
1:AA:507:C:C4	1:AA:508:U:C5	3.00	0.49
1:AA:757:U:O2'	1:AA:879:C:O2	2.29	0.49
1:AA:995:C:N3	1:AA:1046:A:O2'	2.45	0.49
3:AC:40:ARG:NH1	3:AC:57:ILE:HD12	2.27	0.49
3:AC:150:LYS:HG3	3:AC:201:TRP:CE3	2.47	0.49
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.94	0.49
20:AT:69:LYS:NZ	20:AT:70:ASN:OD1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1014:A:C2	22:BA:1149:G:C2	3.00	0.49
22:BA:1142:A:C2	22:BA:1144:A:C1'	2.95	0.49
22:BA:1263:U:OP1	48:B0:13:ARG:NH1	2.45	0.49
22:BA:1588:G:N3	22:BA:1589:U:C6	2.80	0.49
22:BA:1791:A:O2'	24:BC:206:GLY:CA	2.61	0.49
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.27	0.49
22:BA:1935:G:C6	22:BA:1962:C:C5	2.99	0.49
22:BA:2191:A:C6	22:BA:2192:U:C4	3.00	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49
31:BJ:80:HIS:O	31:BJ:81:ILE:C	2.55	0.49
33:BL:64:PHE:CE1	51:B3:47:LYS:HE2	2.47	0.49
38:BQ:76:TYR:CE2	38:BQ:80:ILE:HG13	2.47	0.49
1:CA:930:C:C4	1:CA:931:C:C5	3.00	0.49
1:CA:976:G:C2	1:CA:1363:A:C2	3.00	0.49
1:CA:1077:G:C2	1:CA:1081:A:C2	3.00	0.49
1:CA:1300:G:C6	1:CA:1335:U:C6	3.00	0.49
1:CA:1386:G:C2	1:CA:1387:G:N7	2.80	0.49
9:CI:26:GLY:N	9:CI:61:LEU:O	2.45	0.49
16:CP:70:ARG:O	16:CP:74:LEU:HD23	2.11	0.49
22:DA:49:A:C5	22:DA:177:G:C6	3.00	0.49
22:DA:362:A:C5	22:DA:363:G:C8	3.00	0.49
22:DA:377:G:C6	22:DA:378:C:C4	3.01	0.49
22:DA:1047:G:N2	22:DA:1110:G:O2'	2.45	0.49
22:DA:1194:A:H2'	22:DA:1195:G:O5'	2.12	0.49
22:DA:1462:C:C2	22:DA:1463:C:C5	3.00	0.49
22:DA:2093:G:N7	22:DA:2225:A:H2'	2.27	0.49
22:DA:2119:A:C2	22:DA:2170:A:C4	3.00	0.49
27:DF:3:LYS:HD3	27:DF:101:GLU:CD	2.37	0.49
32:DK:63:VAL:O	32:DK:64:ARG:HG2	2.11	0.49
46:DY:20:ASN:O	46:DY:24:GLU:HB2	2.11	0.49
1:AA:96:U:HO2'	1:AA:97:G:P	2.36	0.49
1:AA:212:G:N2	1:AA:213:G:N3	2.61	0.49
1:AA:402:G:C6	1:AA:403:C:C4	3.00	0.49
1:AA:1048:G:OP1	14:AN:3:LYS:HA	2.11	0.49
1:AA:1407:C:O2'	22:BA:1912:A:N1	2.39	0.49
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.11	0.49
2:AB:104:TRP:CH2	2:AB:154:MET:HB3	2.48	0.49
2:AB:184:PHE:CZ	2:AB:198:PHE:CD2	3.00	0.49
2:AB:207:ILE:HD13	2:AB:207:ILE:N	2.27	0.49
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.46	0.49
7:AG:127:ALA:O	7:AG:128:ALA:C	2.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:66:PHE:CD2	8:AH:67:GLN:HG2	2.47	0.49
12:AL:86:ARG:NH2	12:AL:88:LYS:HD2	2.28	0.49
22:BA:231:A:C6	22:BA:232:G:C2	3.00	0.49
22:BA:278:A:N1	22:BA:362:A:C8	2.80	0.49
22:BA:852:U:H2'	22:BA:853:C:C6	2.48	0.49
22:BA:1796:U:H2'	22:BA:1797:G:C8	2.47	0.49
22:BA:1847:A:H2'	22:BA:1848:A:C8	2.47	0.49
22:BA:1899:A:O2'	22:BA:1900:A:H5"	2.11	0.49
22:BA:2093:G:O2'	22:BA:2094:A:H5'	2.12	0.49
24:BC:209:GLY:O	24:BC:210:ALA:C	2.55	0.49
27:BF:38:MET:HE3	27:BF:57:LEU:HG	1.94	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
31:BJ:136:GLN:N	31:BJ:137:PRO:CD	2.74	0.49
32:BK:7:MET:HE1	32:BK:44:LYS:CG	2.41	0.49
32:BK:25:LEU:HD12	32:BK:38:ILE:HG22	1.93	0.49
33:BL:91:ASP:O	33:BL:94:THR:HB	2.12	0.49
34:BM:51:ARG:O	34:BM:55:ARG:HG3	2.12	0.49
36:BO:67:ASN:HA	36:BO:102:ARG:HD3	1.95	0.49
39:BR:27:ILE:HG22	39:BR:63:VAL:HG21	1.94	0.49
40:BS:96:ILE:CD1	40:BS:98:LYS:HG3	2.42	0.49
43:BV:89:ILE:HG21	43:BV:91:PHE:CZ	2.48	0.49
1:CA:96:U:O2'	1:CA:97:G:OP1	2.25	0.49
1:CA:186:C:O4'	20:CT:76:LYS:HD2	2.12	0.49
1:CA:533:A:H2'	57:CA:1762:HOH:O	2.11	0.49
1:CA:662:U:H2'	1:CA:663:A:C8	2.47	0.49
1:CA:922:G:H4'	5:CE:25:VAL:HA	1.95	0.49
1:CA:1061:G:N7	1:CA:1062:U:C5	2.80	0.49
1:CA:1417:G:N2	1:CA:1484:C:C4	2.81	0.49
5:CE:157:ARG:C	5:CE:159:LYS:H	2.19	0.49
9:CI:97:GLU:N	9:CI:97:GLU:OE2	2.45	0.49
14:CN:80:SER:O	14:CN:83:LYS:N	2.46	0.49
15:CO:42:HIS:O	15:CO:45:GLU:O	2.30	0.49
22:DA:208:C:H2'	22:DA:209:C:C6	2.48	0.49
22:DA:222:A:H3'	22:DA:421:C:C5'	2.43	0.49
22:DA:223:A:C4	22:DA:408:G:H1'	2.47	0.49
22:DA:757:G:H2'	22:DA:757:G:N3	2.27	0.49
22:DA:1280:G:C6	22:DA:1281:G:C5	3.00	0.49
22:DA:1688:U:C4	22:DA:1698:A:C2	3.01	0.49
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.94	0.49
22:DA:2283:C:C2	22:DA:2389:G:C2	3.00	0.49
22:DA:2652:C:C4	22:DA:2653:U:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:149:ILE:HG23	26:DE:188:MET:HG2	1.95	0.49
27:DF:142:ASP:O	27:DF:145:LYS:N	2.43	0.49
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.49
30:DI:28:LEU:HD13	30:DI:38:PHE:CE2	2.48	0.49
38:DQ:25:TYR:CD2	38:DQ:26:GLY:N	2.80	0.49
1:AA:142:G:H3'	1:AA:143:A:H8	1.77	0.49
5:AE:81:LEU:HD22	5:AE:81:LEU:N	2.28	0.49
11:AK:19:GLY:O	11:AK:82:LEU:HA	2.13	0.49
12:AL:110:ARG:NH2	12:AL:117:TYR:CE2	2.80	0.49
17:AQ:7:THR:O	17:AQ:8:LEU:HD12	2.12	0.49
22:BA:826:U:OP1	22:BA:2428:G:H3'	2.13	0.49
22:BA:1132:U:C3'	22:BA:1133:A:H5"	2.41	0.49
22:BA:1566:A:O2'	22:BA:1567:G:H5'	2.12	0.49
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.45	0.49
22:BA:1917:U:C2	22:BA:1918:A:O4'	2.66	0.49
22:BA:2345:G:C4	22:BA:2347:C:C5	3.01	0.49
25:BD:172:VAL:CG2	25:BD:194:PRO:HD3	2.42	0.49
28:BG:69:ARG:C	28:BG:69:ARG:HD3	2.38	0.49
32:BK:38:ILE:HD11	32:BK:112:PHE:HZ	1.77	0.49
40:BS:29:VAL:HG11	40:BS:55:ILE:HD11	1.93	0.49
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.27	0.49
1:CA:206:C:H2'	1:CA:207:C:C5'	2.43	0.49
1:CA:247:G:O6	1:CA:278:G:C6	2.65	0.49
1:CA:1491:G:H5"	12:CL:44:LYS:HD2	1.94	0.49
2:CB:20:THR:O	2:CB:21:ARG:NH1	2.45	0.49
2:CB:221:VAL:O	2:CB:223:GLU:N	2.45	0.49
3:CC:117:ALA:HB1	3:CC:187:SER:CB	2.42	0.49
6:CF:32:ALA:O	6:CF:34:GLY:N	2.44	0.49
9:CI:13:LYS:O	9:CI:13:LYS:HG2	2.13	0.49
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.12	0.49
15:CO:37:ASN:O	15:CO:40:GLN:CB	2.61	0.49
15:CO:70:LEU:HD13	15:CO:78:TYR:HA	1.94	0.49
22:DA:136:G:N2	22:DA:144:A:N7	2.60	0.49
22:DA:321:U:OP2	26:DE:130:LYS:HA	2.13	0.49
22:DA:535:G:C6	22:DA:559:G:C6	3.00	0.49
22:DA:547:A:H3'	22:DA:548:G:C5'	2.42	0.49
22:DA:696:G:C6	22:DA:767:U:O2	2.65	0.49
22:DA:732:C:H2'	22:DA:733:G:O4'	2.12	0.49
22:DA:769:U:C4	22:DA:770:G:N7	2.81	0.49
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.47	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:2:ILE:N	32:DK:33:ALA:O	2.42	0.49
33:DL:110:VAL:C	33:DL:111:ILE:HD12	2.38	0.49
40:DS:86:MET:HE2	40:DS:87:PRO:HD2	1.94	0.49
1:AA:31:G:O2'	1:AA:48:C:N4	2.45	0.49
1:AA:340:U:C2	1:AA:341:C:C5	3.01	0.49
1:AA:448:A:C4	1:AA:487:A:C2	3.00	0.49
1:AA:593:U:O2'	1:AA:594:U:H5'	2.13	0.49
1:AA:684:U:O2	11:AK:41:ALA:HB3	2.13	0.49
1:AA:757:U:O2'	1:AA:879:C:H1'	2.12	0.49
1:AA:792:A:N3	1:AA:794:A:C5	2.80	0.49
1:AA:824:G:H1'	8:AH:2:SER:CA	2.43	0.49
1:AA:926:G:C6	1:AA:1505:G:C5	3.01	0.49
2:AB:91:PHE:CD1	2:AB:150:GLY:CA	2.95	0.49
3:AC:154:SER:OG	3:AC:165:THR:HG22	2.12	0.49
9:AI:28:ILE:HG13	9:AI:63:LEU:HD21	1.95	0.49
16:AP:46:LYS:CD	16:AP:47:GLU:N	2.75	0.49
22:BA:84:A:H4'	22:BA:85:G:O5'	2.11	0.49
22:BA:1059:G:H3'	22:BA:1060:U:H2'	1.95	0.49
22:BA:2271:G:H2'	22:BA:2272:U:C6	2.47	0.49
22:BA:2469:A:C2	22:BA:2482:A:C4	3.01	0.49
24:BC:31:ALA:HB3	24:BC:32:PRO:HD3	1.94	0.49
24:BC:65:VAL:HG12	24:BC:67:PHE:CD2	2.48	0.49
28:BG:89:LEU:N	28:BG:89:LEU:HD12	2.27	0.49
36:BO:109:ALA:O	36:BO:110:ALA:C	2.55	0.49
1:CA:86:G:H1'	1:CA:87:C:O4'	2.12	0.49
1:CA:439:U:H4'	4:CD:121:LYS:HG3	1.93	0.49
1:CA:570:G:C4	1:CA:571:U:C5	3.01	0.49
1:CA:728:A:N1	1:CA:729:A:C6	2.81	0.49
1:CA:803:G:C5	1:CA:804:U:C4	3.01	0.49
1:CA:1125:U:H4'	10:CJ:7:ARG:NH1	2.27	0.49
8:CH:78:VAL:N	8:CH:126:ILE:O	2.45	0.49
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.13	0.49
22:DA:71:A:OP2	22:DA:113:U:H5'	2.12	0.49
22:DA:105:C:H2'	22:DA:106:C:C6	2.47	0.49
22:DA:134:G:C2	22:DA:146:A:C2	3.00	0.49
22:DA:147:C:C4	22:DA:148:U:C4	3.01	0.49
22:DA:247:G:C8	22:DA:249:C:C6	3.01	0.49
22:DA:310:A:H5"	42:DU:15:THR:CG2	2.42	0.49
22:DA:581:C:OP2	38:DQ:33:ARG:NE	2.46	0.49
22:DA:1109:C:C4	22:DA:1110:G:O6	2.66	0.49
22:DA:1286:A:N6	22:DA:1329:U:C2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1384:A:O2'	22:DA:1404:C:O2	2.30	0.49
22:DA:1869:G:C2	22:DA:1873:G:N1	2.80	0.49
22:DA:2179:C:H2'	22:DA:2180:U:C6	2.48	0.49
22:DA:2635:A:N1	22:DA:2636:C:C2	2.81	0.49
22:DA:2671:G:N2	22:DA:2672:U:O2	2.45	0.49
33:DL:111:ILE:HD12	33:DL:111:ILE:N	2.27	0.49
33:DL:114:GLY:O	33:DL:115:GLU:C	2.56	0.49
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.75	0.49
46:DY:24:GLU:HB3	46:DY:46:VAL:HG21	1.95	0.49
1:AA:1035:A:C2	1:AA:1036:A:C4	3.00	0.49
1:AA:1144:G:N1	1:AA:1145:A:C2	2.80	0.49
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.46	0.49
8:AH:113:ASP:O	8:AH:117:ARG:HB2	2.12	0.49
11:AK:127:ARG:N	21:AU:34:ARG:CZ	2.75	0.49
13:AM:98:ARG:HB2	13:AM:100:GLN:OE1	2.13	0.49
14:AN:61:ARG:O	14:AN:62:ASN:CB	2.61	0.49
16:AP:39:PHE:O	16:AP:41:PRO:HD3	2.13	0.49
21:AU:25:LYS:C	21:AU:27:GLY:N	2.69	0.49
21:AU:25:LYS:C	21:AU:27:GLY:H	2.20	0.49
22:BA:1022:G:C6	22:BA:1140:C:C4	3.01	0.49
22:BA:1073:A:C2'	22:BA:1074:G:H5"	2.41	0.49
22:BA:1324:G:C4	22:BA:1328:A:N6	2.81	0.49
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.12	0.49
22:BA:1832:C:N4	22:BA:1833:C:C4	2.81	0.49
22:BA:1918:A:H4'	22:BA:1919:A:OP1	2.13	0.49
22:BA:2236:U:H2'	22:BA:2237:G:O4'	2.12	0.49
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.43	0.49
25:BD:103:ASP:O	25:BD:104:VAL:HG22	2.11	0.49
26:BE:29:HIS:CE1	33:BL:8:PRO:HB3	2.48	0.49
27:BF:61:SER:O	27:BF:63:GLN:N	2.42	0.49
35:BN:118:ARG:O	35:BN:120:GLU:N	2.46	0.49
38:BQ:87:SER:HB2	39:BR:51:VAL:HA	1.93	0.49
1:CA:223:A:C6	1:CA:224:U:C4	3.01	0.49
1:CA:721:G:H4'	1:CA:722:G:O5'	2.12	0.49
1:CA:892:A:C6	1:CA:893:C:C4	3.00	0.49
1:CA:1203:C:H4'	14:CN:67:THR:HB	1.94	0.49
10:CJ:85:ASP:HA	10:CJ:88:MET:HB2	1.95	0.49
22:DA:155:A:C2	22:DA:172:A:C2	3.00	0.49
22:DA:321:U:C6	26:DE:159:LEU:HD22	2.47	0.49
22:DA:374:A:C6	22:DA:401:A:C8	3.01	0.49
22:DA:1223:G:OP2	39:DR:68:ARG:NH1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1831:G:C6	22:DA:1832:C:C4	3.00	0.49
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.42	0.49
22:DA:2531:A:C5'	28:DG:157:TYR:CZ	2.96	0.49
24:DC:78:VAL:HG21	24:DC:110:LEU:HD21	1.95	0.49
24:DC:108:LYS:HA	24:DC:196:GLY:HA2	1.94	0.49
24:DC:230:HIS:ND1	24:DC:231:PRO:HD2	2.28	0.49
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.93	0.49
30:DI:33:VAL:HG22	30:DI:67:PHE:CE1	2.48	0.49
30:DI:53:LEU:HD21	30:DI:82:LYS:HE2	1.93	0.49
32:DK:121:GLU:O	32:DK:122:VAL:C	2.56	0.49
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.47	0.49
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.45	0.49
1:AA:737:C:H2'	1:AA:738:C:H6	1.78	0.49
1:AA:818:G:HO2'	1:AA:820:U:H6	1.55	0.49
1:AA:1122:U:C4	1:AA:1123:U:C5	2.99	0.49
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.45	0.49
1:AA:1181:G:H4'	1:AA:1182:G:OP1	2.11	0.49
2:AB:131:LYS:HA	2:AB:131:LYS:HE2	1.94	0.49
2:AB:206:ALA:O	2:AB:208:ARG:N	2.45	0.49
4:AD:105:MET:CB	4:AD:107:PHE:CE2	2.96	0.49
6:AF:84:VAL:CG2	6:AF:84:VAL:O	2.60	0.49
13:AM:71:ARG:NH2	27:BF:136:ILE:HG22	2.28	0.49
19:AS:63:THR:O	19:AS:65:GLU:N	2.43	0.49
22:BA:481:G:O2'	22:BA:507:A:N1	2.35	0.49
22:BA:589:U:H2'	22:BA:590:A:C8	2.48	0.49
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.13	0.49
22:BA:1795:C:C4	22:BA:1796:U:C5	3.00	0.49
23:BB:99:A:H2'	23:BB:99:A:N3	2.27	0.49
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.28	0.49
30:BI:11:LEU:O	30:BI:24:VAL:HG11	2.13	0.49
34:BM:2:LEU:HB3	34:BM:68:PHE:CE2	2.48	0.49
40:BS:41:LYS:O	40:BS:44:ALA:HB3	2.11	0.49
1:CA:64:G:C2	1:CA:67:C:N4	2.81	0.49
1:CA:1215:G:C5	1:CA:1216:A:N7	2.81	0.49
2:CB:103:ASN:O	2:CB:103:ASN:OD1	2.30	0.49
2:CB:184:PHE:CE2	2:CB:198:PHE:CD2	3.00	0.49
4:CD:146:ARG:O	4:CD:150:LYS:N	2.46	0.49
6:CF:93:LYS:O	6:CF:93:LYS:HG2	2.12	0.49
7:CG:78:ARG:HB2	7:CG:85:TYR:HB2	1.95	0.49
9:CI:45:ARG:HG2	9:CI:46:MET:N	2.28	0.49
14:CN:3:LYS:HD3	14:CN:6:MET:HG2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.60	0.49
15:CO:82:ILE:HG13	15:CO:83:GLU:N	2.26	0.49
20:CT:28:MET:HE1	20:CT:67:ILE:HG12	1.94	0.49
22:DA:822:G:O6	22:DA:943:A:H2	1.96	0.49
22:DA:1057:A:C2	22:DA:1082:U:N3	2.81	0.49
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.48	0.49
22:DA:1655:A:C6	22:DA:1656:C:C2	3.00	0.49
22:DA:1802:A:OP2	22:DA:1815:A:N6	2.41	0.49
22:DA:2062:A:C2	55:DA:3001:VIR:H313	2.48	0.49
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.12	0.49
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.48	0.49
22:DA:2848:G:OP2	37:DP:95:ALA:N	2.45	0.49
22:DA:2896:C:C4	22:DA:2897:U:C5	3.01	0.49
26:DE:45:ALA:HA	26:DE:87:ALA:O	2.13	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
32:DK:31:ARG:CB	32:DK:32:TYR:CD1	2.96	0.49
40:DS:84:ARG:HB2	40:DS:96:ILE:CG1	2.43	0.49
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.60	0.49
1:AA:451:A:H4'	1:AA:452:A:O5'	2.13	0.49
1:AA:452:A:N6	1:AA:480:U:C2	2.81	0.49
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.48	0.49
1:AA:1337:G:H5"	1:AA:1338:G:OP1	2.13	0.49
2:AB:33:GLY:N	2:AB:40:ILE:O	2.45	0.49
4:AD:124:MET:CE	4:AD:146:ARG:HD2	2.43	0.49
5:AE:97:GLN:O	5:AE:123:VAL:HG12	2.13	0.49
7:AG:145:ALA:O	7:AG:147:ALA:N	2.44	0.49
12:AL:67:ILE:HG21	12:AL:72:HIS:CD2	2.47	0.49
22:BA:368:A:C5	22:BA:369:U:C4	3.00	0.49
22:BA:577:G:C6	22:BA:578:G:O6	2.65	0.49
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.13	0.49
22:BA:1179:G:N7	22:BA:1180:U:O4'	2.45	0.49
22:BA:1179:G:N7	22:BA:1180:U:C1'	2.76	0.49
22:BA:1914:C:H2'	22:BA:1915:U:O5'	2.13	0.49
22:BA:1918:A:HO2'	22:BA:1920:C:N4	2.10	0.49
22:BA:2469:A:O2'	34:BM:55:ARG:NH1	2.45	0.49
22:BA:2572:A:H2'	25:BD:149:ASN:HD22	1.78	0.49
24:BC:162:VAL:CG1	24:BC:163:GLN:N	2.75	0.49
27:BF:28:VAL:HG13	27:BF:28:VAL:O	2.11	0.49
30:BI:112:THR:O	30:BI:113:LYS:C	2.55	0.49
33:BL:77:ILE:HD11	33:BL:101:ILE:HG21	1.94	0.49
35:BN:114:GLU:OE2	35:BN:118:ARG:NH2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:79:PHE:CZ	38:BQ:83:LEU:HD11	2.47	0.49
39:BR:51:VAL:CG2	39:BR:52:PRO:HD2	2.43	0.49
1:CA:158:G:C4	1:CA:159:G:C8	3.01	0.49
1:CA:216:U:H5"	1:CA:464:U:H4'	1.95	0.49
1:CA:321:A:C8	1:CA:328:C:C2	3.00	0.49
1:CA:445:G:C2	1:CA:490:C:C2	3.00	0.49
2:CB:119:THR:O	2:CB:120:GLN:HB3	2.12	0.49
5:CE:99:ALA:HB2	5:CE:124:LEU:CD1	2.42	0.49
6:CF:25:TYR:N	6:CF:25:TYR:CD1	2.77	0.49
7:CG:148:ASN:C	7:CG:150:ALA:H	2.21	0.49
12:CL:80:ILE:HD12	12:CL:97:THR:HG21	1.93	0.49
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.13	0.49
22:DA:226:A:N6	22:DA:227:A:N1	2.61	0.49
22:DA:374:A:C2	22:DA:401:A:C4	3.00	0.49
22:DA:892:A:H2'	22:DA:892:A:N3	2.28	0.49
22:DA:1109:C:C4	22:DA:1110:G:C6	3.01	0.49
22:DA:1383:A:C2	22:DA:1384:A:C4	3.01	0.49
22:DA:1597:A:O3'	22:DA:1598:A:H8	1.96	0.49
22:DA:1670:C:C5	22:DA:1671:U:C4	3.01	0.49
23:DB:87:U:O2'	23:DB:88:C:H5'	2.12	0.49
26:DE:42:GLY:HA3	26:DE:90:GLN:O	2.13	0.49
27:DF:142:ASP:O	27:DF:144:ASP:N	2.46	0.49
33:DL:77:ILE:HG23	33:DL:81:ASP:OD1	2.13	0.49
39:DR:51:VAL:O	39:DR:52:PRO:C	2.53	0.49
43:DV:35:GLU:CD	43:DV:35:GLU:N	2.70	0.49
43:DV:44:HIS:CE1	43:DV:85:LYS:HB2	2.48	0.49
45:DX:58:VAL:HG12	45:DX:59:ILE:N	2.27	0.49
1:AA:85:U:O4'	1:AA:86:G:N2	2.46	0.49
1:AA:299:G:H2'	1:AA:300:A:C8	2.48	0.49
1:AA:316:C:C5	1:AA:351:G:C2	3.01	0.49
1:AA:673:A:H2'	1:AA:674:G:C8	2.48	0.49
1:AA:829:G:C6	1:AA:858:G:N2	2.81	0.49
1:AA:1080:A:OP1	5:AE:52:LYS:CE	2.60	0.49
1:AA:1109:C:P	3:AC:176:HIS:CE1	3.05	0.49
1:AA:1293:C:H2'	1:AA:1294:G:O4'	2.13	0.49
1:AA:1317:C:H4'	14:AN:49:GLN:HG2	1.94	0.49
10:AJ:66:GLU:HG2	14:AN:99:ALA:HB2	1.94	0.49
17:AQ:5:ILE:O	17:AQ:5:ILE:HG22	2.12	0.49
18:AR:48:ARG:N	18:AR:48:ARG:HD2	2.27	0.49
22:BA:142:A:C6	22:BA:143:C:N3	2.81	0.49
22:BA:936:A:H2'	22:BA:937:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1085:A:C6	22:BA:1086:A:N6	2.80	0.49
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.78	0.49
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.12	0.49
22:BA:1916:A:C2	22:BA:1917:U:H1'	2.48	0.49
22:BA:1917:U:O2	22:BA:1918:A:O4'	2.30	0.49
22:BA:1917:U:C3'	22:BA:1918:A:H5'	2.42	0.49
22:BA:1999:C:H5"	22:BA:2723:C:O2'	2.13	0.49
22:BA:2305:U:C4	22:BA:2306:C:C4	3.01	0.49
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.48	0.49
22:BA:2517:C:C6	22:BA:2542:A:N7	2.81	0.49
24:BC:3:VAL:O	24:BC:3:VAL:HG23	2.13	0.49
26:BE:145:ASP:HB3	26:BE:184:ASP:OD2	2.13	0.49
37:BP:114:LEU:O	37:BP:115:ASN:HB3	2.12	0.49
39:BR:67:GLY:C	39:BR:93:PHE:CE1	2.90	0.49
1:CA:109:A:C2	1:CA:327:A:N1	2.81	0.49
1:CA:162:A:H2'	1:CA:163:C:O4'	2.12	0.49
1:CA:211:G:O2'	1:CA:212:G:C4'	2.60	0.49
1:CA:373:A:N3	1:CA:374:A:C8	2.81	0.49
1:CA:375:U:C2	1:CA:376:G:C8	3.00	0.49
1:CA:651:C:N4	1:CA:753:A:OP2	2.44	0.49
1:CA:748:G:H2'	1:CA:749:A:C8	2.48	0.49
1:CA:773:G:C2	1:CA:807:A:C2	3.01	0.49
1:CA:992:U:C6	1:CA:1043:G:N7	2.81	0.49
1:CA:1381:U:O2	7:CG:78:ARG:O	2.31	0.49
2:CB:211:THR:HA	2:CB:214:LEU:HB2	1.94	0.49
9:CI:19:VAL:HG21	9:CI:82:GLY:HA3	1.94	0.49
19:CS:53:ASN:OD1	19:CS:55:ARG:HG3	2.13	0.49
19:CS:63:THR:HG22	19:CS:64:ASP:N	2.27	0.49
22:DA:291:G:N1	22:DA:350:G:N7	2.61	0.49
22:DA:1867:G:O6	22:DA:1875:G:C2	2.66	0.49
22:DA:2133:G:N3	22:DA:2158:A:N1	2.61	0.49
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.48	0.49
26:DE:187:VAL:HG12	26:DE:187:VAL:O	2.13	0.49
35:DN:84:GLY:N	35:DN:85:PRO:HD2	2.28	0.49
39:DR:29:THR:O	39:DR:29:THR:HG22	2.13	0.49
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.43	0.49
1:AA:545:C:C2'	1:AA:546:A:H5'	2.43	0.48
1:AA:1176:A:H3'	1:AA:1177:G:C8	2.48	0.48
1:AA:1349:A:C2	1:AA:1374:A:C4	3.01	0.48
1:AA:1368:A:O2'	1:AA:1369:C:H5'	2.13	0.48
2:AB:188:ASP:HB2	2:AB:204:ASP:OD2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.13	0.48
13:AM:66:GLU:OE1	13:AM:66:GLU:HA	2.12	0.48
19:AS:4:SER:O	19:AS:6:LYS:N	2.46	0.48
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.12	0.48
22:BA:1167:C:H2'	22:BA:1168:G:H5"	1.95	0.48
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.11	0.48
22:BA:1735:A:C2	22:BA:1736:U:C1'	2.96	0.48
22:BA:1800:C:H3'	24:BC:146:MET:HE1	1.95	0.48
22:BA:2659:G:OP1	28:BG:158:LYS:HE3	2.13	0.48
25:BD:12:THR:HG23	37:BP:9:GLU:OE2	2.12	0.48
25:BD:104:VAL:CG2	25:BD:105:LYS:N	2.76	0.48
27:BF:6:ASP:O	27:BF:7:TYR:C	2.54	0.48
30:BI:122:ILE:O	30:BI:122:ILE:HG22	2.13	0.48
32:BK:109:SER:O	32:BK:110:GLU:C	2.55	0.48
36:BO:117:PHE:CD1	36:BO:117:PHE:C	2.90	0.48
43:BV:1:MET:SD	43:BV:1:MET:C	2.96	0.48
47:BZ:30:ARG:O	47:BZ:31:ARG:HB3	2.13	0.48
1:CA:456:A:N6	1:CA:457:G:C6	2.81	0.48
1:CA:718:A:H5'	11:CK:119:ASN:ND2	2.28	0.48
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.94	0.48
1:CA:1186:G:H5'	9:CI:112:GLU:OE1	2.13	0.48
1:CA:1491:G:H2'	1:CA:1492:A:C8	2.48	0.48
9:CI:57:MET:O	9:CI:60:LYS:HB2	2.13	0.48
9:CI:128:SER:O	9:CI:129:LYS:C	2.56	0.48
13:CM:79:ARG:O	13:CM:83:LEU:HD23	2.12	0.48
18:CR:71:THR:OG1	18:CR:72:ASP:N	2.46	0.48
22:DA:265:A:H4'	22:DA:266:G:OP1	2.13	0.48
22:DA:306:U:O4	22:DA:307:G:C6	2.65	0.48
22:DA:329:G:O4'	22:DA:477:A:H1'	2.13	0.48
22:DA:410:G:C2	22:DA:2407:A:C5	3.01	0.48
22:DA:569:U:H5"	22:DA:821:A:C2	2.48	0.48
22:DA:661:A:H2'	22:DA:662:G:O4'	2.13	0.48
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.48	0.48
22:DA:1358:G:C8	22:DA:1371:G:O6	2.66	0.48
22:DA:1362:C:H2'	22:DA:1363:C:H5'	1.95	0.48
22:DA:1465:G:H2'	22:DA:1466:U:C6	2.48	0.48
22:DA:1936:A:N6	22:DA:1963:U:C4	2.81	0.48
22:DA:1953:A:O2'	22:DA:2559:C:O2'	2.26	0.48
22:DA:1973:G:C5	22:DA:1974:C:C5	3.01	0.48
22:DA:2298:A:C4	22:DA:2321:U:C5	3.00	0.48
22:DA:2874:C:OP2	57:DA:3801:HOH:O	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:41:LYS:O	31:DJ:42:ALA:C	2.56	0.48
33:DL:111:ILE:C	33:DL:131:ALA:HB2	2.37	0.48
36:DO:115:LEU:O	36:DO:117:PHE:N	2.46	0.48
41:DT:7:LEU:CD2	41:DT:46:ALA:HA	2.43	0.48
41:DT:73:ARG:HA	41:DT:73:ARG:NH2	2.28	0.48
1:AA:215:C:H2'	1:AA:216:U:O4'	2.13	0.48
1:AA:877:G:H21	8:AH:2:SER:N	2.11	0.48
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.31	0.48
1:AA:1035:A:C2	1:AA:1036:A:C5	3.01	0.48
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.48	0.48
7:AG:97:ASN:OD1	7:AG:97:ASN:N	2.45	0.48
8:AH:55:THR:C	8:AH:57:PRO:HD3	2.38	0.48
8:AH:83:LEU:C	8:AH:83:LEU:CD2	2.86	0.48
13:AM:14:HIS:HB2	13:AM:17:ILE:HD12	1.94	0.48
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	1.94	0.48
22:BA:250:G:C5	22:BA:251:A:C5	3.00	0.48
22:BA:280:U:H2'	22:BA:281:C:O4'	2.13	0.48
22:BA:578:G:OP1	22:BA:1255:U:O2'	2.31	0.48
22:BA:644:A:H2'	22:BA:645:C:O4'	2.12	0.48
22:BA:1385:A:C2	22:BA:1386:C:C2	3.01	0.48
22:BA:2580:U:H5"	25:BD:135:GLY:O	2.13	0.48
26:BE:108:ILE:CD1	26:BE:180:LEU:HB3	2.43	0.48
27:BF:38:MET:HG3	27:BF:152:LEU:CD1	2.43	0.48
28:BG:24:ILE:HG21	28:BG:72:LEU:HD21	1.95	0.48
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.14	0.48
32:BK:66:LYS:HD3	32:BK:80:ASP:O	2.13	0.48
34:BM:136:MET:HE3	43:BV:76:ASP:HA	1.94	0.48
37:BP:58:ALA:HB1	37:BP:74:PHE:O	2.13	0.48
40:BS:17:VAL:HG12	40:BS:76:VAL:HG21	1.96	0.48
43:BV:50:MET:HE2	43:BV:56:PHE:CE1	2.48	0.48
1:CA:158:G:C5	1:CA:159:G:N7	2.81	0.48
1:CA:173:U:C6	1:CA:197:A:C2	3.01	0.48
1:CA:216:U:H2'	1:CA:217:C:C6	2.47	0.48
1:CA:455:G:C2	1:CA:478:A:N1	2.81	0.48
1:CA:923:A:H2'	1:CA:924:C:O4'	2.13	0.48
1:CA:1365:G:C6	1:CA:1366:C:N3	2.81	0.48
1:CA:1422:G:C6	1:CA:1423:G:N7	2.81	0.48
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.13	0.48
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.27	0.48
6:CF:13:ASP:O	6:CF:15:SER:N	2.39	0.48
12:CL:61:PHE:N	12:CL:61:PHE:HD1	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:187:G:N1	22:DA:210:C:N3	2.60	0.48
22:DA:224:U:OP2	22:DA:408:G:N2	2.46	0.48
22:DA:465:G:C6	22:DA:466:A:N6	2.82	0.48
22:DA:604:G:N1	22:DA:605:G:C5	2.81	0.48
22:DA:664:G:H4'	22:DA:941:A:OP1	2.13	0.48
22:DA:728:G:C2	22:DA:730:A:C4	3.01	0.48
22:DA:1520:U:O4	22:DA:1521:G:C6	2.66	0.48
22:DA:1783:A:N1	22:DA:2587:A:C2	2.81	0.48
22:DA:1858:A:C2	22:DA:1859:U:C2	3.01	0.48
22:DA:2286:G:H5'	22:DA:2287:A:O4'	2.13	0.48
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.13	0.48
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.48
35:DN:30:ARG:HD2	35:DN:31:HIS:NE2	2.28	0.48
35:DN:108:ALA:HB3	35:DN:110:MET:CE	2.43	0.48
1:AA:90:C:O2'	1:AA:91:U:OP2	2.26	0.48
1:AA:131:A:O2'	1:AA:262:A:N3	2.33	0.48
1:AA:135:C:H2'	1:AA:136:C:H5'	1.94	0.48
1:AA:223:A:H2'	1:AA:224:U:C6	2.49	0.48
1:AA:233:C:H2'	1:AA:234:C:H6	1.78	0.48
1:AA:645:G:C4	1:AA:646:G:C8	3.01	0.48
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.48	0.48
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.43	0.48
3:AC:77:ILE:HD11	3:AC:103:ILE:HG12	1.95	0.48
6:AF:9:MET:CE	18:AR:65:LEU:HD22	2.43	0.48
6:AF:76:THR:O	6:AF:77:THR:C	2.56	0.48
22:BA:319:G:N9	22:BA:333:G:N2	2.61	0.48
22:BA:531:C:H4'	22:BA:532:A:H5"	1.95	0.48
22:BA:586:A:C2	22:BA:1254:A:C2	3.01	0.48
22:BA:1094:U:O4	22:BA:1097:U:OP2	2.31	0.48
22:BA:1482:G:C6	22:BA:1508:A:C6	3.00	0.48
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.28	0.48
22:BA:2076:U:O2	22:BA:2076:U:O5'	2.30	0.48
22:BA:2326:C:H1'	22:BA:2327:A:OP1	2.13	0.48
24:BC:157:SER:O	24:BC:160:THR:HG23	2.12	0.48
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.96	0.48
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.48
34:BM:55:ARG:CZ	34:BM:55:ARG:HB3	2.43	0.48
38:BQ:105:ALA:O	38:BQ:106:PHE:C	2.57	0.48
43:BV:65:VAL:O	43:BV:65:VAL:HG22	2.12	0.48
1:CA:202:G:H2'	1:CA:203:G:O4'	2.14	0.48
1:CA:451:A:H61	1:CA:481:G:H5'	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:577:G:C1'	1:CA:816:A:H2'	2.44	0.48
1:CA:881:G:C5	1:CA:882:C:C5	3.02	0.48
1:CA:963:G:O2'	1:CA:964:A:H5'	2.12	0.48
1:CA:1041:G:C6	1:CA:1042:A:N6	2.82	0.48
1:CA:1126:U:C6	1:CA:1281:C:C4	3.01	0.48
3:CC:130:PHE:CE1	3:CC:131:ARG:HD3	2.48	0.48
14:CN:51:LEU:O	14:CN:53:ARG:N	2.46	0.48
21:CU:34:ARG:CD	21:CU:35:ARG:HB2	2.43	0.48
22:DA:12:U:O2	22:DA:12:U:H2'	2.12	0.48
22:DA:279:A:N6	22:DA:361:G:O2'	2.45	0.48
22:DA:686:U:H6	22:DA:788:A:N1	2.10	0.48
22:DA:845:A:N1	22:DA:847:U:C6	2.81	0.48
22:DA:1272:A:C6	22:DA:1618:A:H1'	2.48	0.48
22:DA:1555:G:N2	22:DA:1556:C:H1'	2.28	0.48
22:DA:1769:U:O2'	22:DA:1958:C:OP1	2.29	0.48
22:DA:2286:G:C4'	22:DA:2287:A:O5'	2.59	0.48
22:DA:2489:U:HO2'	22:DA:2491:U:H5	1.60	0.48
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.28	0.48
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD1	2.46	0.48
38:DQ:14:HIS:O	38:DQ:18:LEU:HD23	2.12	0.48
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.61	0.48
40:DS:89:ALA:O	40:DS:90:LYS:HB2	2.13	0.48
41:DT:73:ARG:HA	41:DT:73:ARG:CZ	2.43	0.48
1:AA:38:G:C2	1:AA:397:A:C2	3.02	0.48
1:AA:65:A:C2	1:AA:381:C:C6	3.02	0.48
1:AA:828:U:O4	1:AA:859:G:C8	2.67	0.48
1:AA:829:G:C2	1:AA:830:G:C8	3.02	0.48
1:AA:831:A:C2	1:AA:832:G:N9	2.82	0.48
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.94	0.48
4:AD:78:GLU:O	4:AD:79:ALA:C	2.56	0.48
4:AD:187:GLU:O	4:AD:188:ARG:C	2.57	0.48
5:AE:77:ASN:O	5:AE:78:ASN:HB3	2.14	0.48
7:AG:13:LEU:HD22	7:AG:13:LEU:N	2.29	0.48
20:AT:80:THR:O	20:AT:83:ILE:HG13	2.14	0.48
20:AT:83:ILE:O	20:AT:87:ALA:CB	2.61	0.48
21:AU:47:ARG:HA	21:AU:47:ARG:HE	1.77	0.48
22:BA:196:A:O2'	22:BA:805:G:O6	2.30	0.48
22:BA:693:A:C5	22:BA:694:U:C4	3.01	0.48
22:BA:973:A:H5"	39:BR:81:LYS:HG3	1.95	0.48
22:BA:1124:G:H1'	52:B4:38:GLY:OXT	2.14	0.48
22:BA:1338:G:N7	41:BT:66:LYS:NZ	2.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1445:G:C6	22:BA:1446:C:C4	3.01	0.48
22:BA:2032:G:C8	57:BA:3535:HOH:O	2.66	0.48
22:BA:2694:G:N1	22:BA:2695:U:C2	2.82	0.48
22:BA:2839:G:C2'	22:BA:2840:C:O5'	2.62	0.48
22:BA:2886:A:C4	22:BA:2887:A:C8	3.01	0.48
24:BC:37:ASN:O	24:BC:38:SER:HB3	2.14	0.48
38:BQ:25:TYR:O	38:BQ:26:GLY:C	2.56	0.48
38:BQ:76:TYR:C	38:BQ:76:TYR:CD2	2.91	0.48
42:BU:16:GLY:O	42:BU:18:ASP:N	2.46	0.48
46:BY:37:LEU:HD11	46:BY:39:GLN:O	2.14	0.48
1:CA:243:A:H4'	1:CA:244:U:H5"	1.95	0.48
1:CA:260:G:C6	1:CA:261:U:C4	3.01	0.48
1:CA:406:G:C2	1:CA:407:U:C6	3.02	0.48
1:CA:644:U:C2	1:CA:645:G:C8	3.01	0.48
1:CA:1108:G:H5"	3:CC:176:HIS:CD2	2.48	0.48
1:CA:1144:G:C2	1:CA:1145:A:C2	3.01	0.48
1:CA:1149:C:N4	1:CA:1150:A:C6	2.80	0.48
1:CA:1279:G:H4'	1:CA:1280:A:OP1	2.13	0.48
2:CB:88:ASP:N	2:CB:88:ASP:OD1	2.46	0.48
5:CE:115:LEU:HG	5:CE:123:VAL:HG21	1.95	0.48
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.27	0.48
16:CP:81:ALA:O	16:CP:82:ALA:HB2	2.14	0.48
22:DA:693:A:C5	22:DA:694:U:C4	3.02	0.48
22:DA:1285:A:N6	22:DA:1329:U:C6	2.82	0.48
22:DA:1358:G:H1'	22:DA:1374:G:N2	2.28	0.48
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.43	0.48
22:DA:1529:G:C6	22:DA:1543:G:N2	2.81	0.48
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.94	0.48
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.14	0.48
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.48	0.48
22:DA:2244:U:C5	22:DA:2245:U:C5	3.01	0.48
22:DA:2438:U:O2'	22:DA:2440:C:OP1	2.25	0.48
22:DA:2736:A:C2	22:DA:2769:U:O2	2.66	0.48
24:DC:3:VAL:HG11	24:DC:202:LEU:HD23	1.95	0.48
24:DC:17:VAL:CB	24:DC:204:VAL:HG22	2.44	0.48
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	1.95	0.48
46:DY:50:VAL:O	46:DY:54:LYS:HG3	2.13	0.48
1:AA:72:A:H2'	1:AA:73:C:H5'	1.95	0.48
1:AA:463:U:H3'	1:AA:464:U:C6	2.47	0.48
1:AA:761:G:H2'	1:AA:762:U:C6	2.49	0.48
1:AA:1135:U:C2'	1:AA:1136:C:O5'	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1263:C:H2'	1:AA:1264:U:O4'	2.14	0.48
2:AB:164:ILE:HG23	2:AB:165:ASP:N	2.29	0.48
4:AD:147:GLU:HA	4:AD:150:LYS:HD3	1.94	0.48
7:AG:146:GLU:O	7:AG:149:LYS:CB	2.62	0.48
22:BA:189:G:OP2	45:BX:26:LYS:HE3	2.13	0.48
22:BA:577:G:C6	22:BA:578:G:C6	3.01	0.48
22:BA:1057:A:N1	22:BA:1081:U:O4	2.47	0.48
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.94	0.48
22:BA:1138:G:O2'	31:BJ:107:GLY:HA3	2.13	0.48
22:BA:1171:G:C5	22:BA:1172:C:C4	3.01	0.48
22:BA:1340:U:C5	22:BA:1603:A:C8	3.01	0.48
22:BA:1735:A:C4	22:BA:1736:U:C6	3.01	0.48
22:BA:1871:A:C8	22:BA:1872:A:C6	3.02	0.48
22:BA:2694:G:C6	22:BA:2695:U:C4	3.02	0.48
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.43	0.48
28:BG:141:ILE:C	28:BG:141:ILE:HD12	2.39	0.48
36:BO:24:THR:HG22	36:BO:42:PRO:CG	2.44	0.48
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.92	0.48
1:CA:72:A:C5	1:CA:73:C:C5	3.02	0.48
1:CA:371:A:H1'	1:CA:482:A:H1'	1.94	0.48
1:CA:572:A:H5'	1:CA:573:A:P	2.54	0.48
1:CA:577:G:N3	1:CA:578:C:C6	2.82	0.48
1:CA:676:A:C2	1:CA:677:U:C4	3.02	0.48
1:CA:718:A:C8	1:CA:719:C:C5	3.01	0.48
1:CA:909:A:H2'	1:CA:910:C:O4'	2.13	0.48
1:CA:1105:A:C2	1:CA:1106:G:C5	3.01	0.48
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.14	0.48
2:CB:81:LYS:HG3	2:CB:91:PHE:CZ	2.48	0.48
4:CD:29:ASP:O	4:CD:31:LYS:NZ	2.44	0.48
5:CE:38:VAL:HG12	5:CE:39:VAL:N	2.28	0.48
5:CE:121:HIS:O	5:CE:122:ASN:HB3	2.13	0.48
7:CG:126:ASP:N	7:CG:126:ASP:OD1	2.45	0.48
14:CN:36:ALA:HB2	14:CN:42:TRP:CH2	2.47	0.48
14:CN:52:PRO:O	14:CN:53:ARG:CB	2.60	0.48
21:CU:12:PHE:N	21:CU:12:PHE:CD1	2.80	0.48
22:DA:21:A:C2	22:DA:520:G:C2	3.02	0.48
22:DA:158:U:O2	22:DA:169:G:C2	2.67	0.48
22:DA:186:G:C2	22:DA:211:C:O2	2.66	0.48
22:DA:310:A:O2'	22:DA:311:A:P	2.72	0.48
22:DA:465:G:C6	22:DA:466:A:C6	3.01	0.48
22:DA:533:G:H5'	38:DQ:24:TYR:CD1	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:856:G:C2	22:DA:922:C:N3	2.82	0.48
22:DA:1042:G:C6	22:DA:1043:C:C4	3.02	0.48
22:DA:1146:C:N4	22:DA:1147:A:N6	2.62	0.48
22:DA:1855:U:C4	22:DA:1856:U:C4	3.01	0.48
22:DA:2212:A:C2	22:DA:2214:C:N4	2.81	0.48
22:DA:2379:G:C6	22:DA:2380:C:C4	3.02	0.48
22:DA:2392:A:C2	33:DL:55:MET:HE3	2.47	0.48
22:DA:2889:C:H2'	22:DA:2890:G:C8	2.48	0.48
55:DA:3001:VIR:N9	55:DA:3001:VIR:C4	2.77	0.48
24:DC:15:HIS:O	24:DC:204:VAL:HG21	2.13	0.48
27:DF:8:TYR:OH	27:DF:29:PRO:O	2.32	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
32:DK:10:VAL:CG1	32:DK:12:ASP:OD1	2.61	0.48
34:DM:124:LEU:HD23	34:DM:124:LEU:N	2.28	0.48
35:DN:108:ALA:O	35:DN:110:MET:HE2	2.14	0.48
50:D2:11:LYS:O	50:D2:15:SER:N	2.46	0.48
50:D2:43:THR:O	50:D2:44:VAL:HB	2.13	0.48
1:AA:146:G:C2	1:AA:177:G:N7	2.82	0.48
1:AA:652:U:C4	1:AA:752:G:N3	2.80	0.48
1:AA:1048:G:N3	1:AA:1050:G:N7	2.62	0.48
5:AE:95:PHE:C	5:AE:95:PHE:CD1	2.90	0.48
10:AJ:52:LEU:HB3	14:AN:81:ARG:HE	1.78	0.48
11:AK:127:ARG:N	21:AU:34:ARG:NH2	2.62	0.48
17:AQ:16:LYS:C	17:AQ:17:MET:CE	2.87	0.48
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.44	0.48
22:BA:569:U:O2'	22:BA:983:A:N1	2.40	0.48
22:BA:1106:G:C2	22:BA:1107:G:N9	2.82	0.48
22:BA:1182:G:H2'	22:BA:1183:U:O4'	2.14	0.48
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.95	0.48
22:BA:1656:C:O5'	22:BA:1656:C:H6	1.97	0.48
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.48	0.48
22:BA:2555:U:C5	22:BA:2556:C:C2	3.01	0.48
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.48	0.48
26:BE:125:SER:OG	26:BE:126:VAL:N	2.45	0.48
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.28	0.48
41:BT:29:THR:OG1	41:BT:86:THR:HG23	2.14	0.48
1:CA:145:G:C2	1:CA:146:G:C8	3.01	0.48
1:CA:386:C:C4	1:CA:387:U:C5	3.02	0.48
1:CA:1358:U:H5"	14:CN:73:PHE:O	2.13	0.48
5:CE:77:ASN:HB2	5:CE:82:GLN:HG2	1.95	0.48
5:CE:133:PRO:HA	5:CE:136:VAL:HG12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.14	0.48
22:DA:233:A:C2	22:DA:234:U:H1'	2.48	0.48
22:DA:396:G:H1'	45:DX:29:PHE:HB3	1.95	0.48
22:DA:704:G:H1'	22:DA:726:G:N2	2.29	0.48
22:DA:868:U:C4	22:DA:869:G:N7	2.81	0.48
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.14	0.48
22:DA:1838:C:H4'	22:DA:1839:G:H8	1.79	0.48
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.49	0.48
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.43	0.48
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.14	0.48
31:DJ:128:ASN:CG	31:DJ:128:ASN:O	2.57	0.48
32:DK:10:VAL:HG12	32:DK:12:ASP:OD1	2.13	0.48
35:DN:53:THR:HA	35:DN:56:LYS:HG3	1.96	0.48
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.12	0.48
48:D0:28:LEU:O	48:D0:28:LEU:HD13	2.13	0.48
1:AA:469:C:H2'	1:AA:470:C:O4'	2.14	0.48
1:AA:557:G:C6	1:AA:558:G:N1	2.81	0.48
1:AA:685:G:N1	1:AA:686:U:O4	2.47	0.48
1:AA:895:G:C6	1:AA:896:C:C4	3.02	0.48
4:AD:188:ARG:NH2	4:AD:197:GLU:OE2	2.46	0.48
9:AI:57:MET:HA	9:AI:60:LYS:HB2	1.94	0.48
9:AI:88:MET:CG	9:AI:89:GLU:N	2.76	0.48
12:AL:94:ARG:C	12:AL:95:TYR:CD1	2.92	0.48
13:AM:91:HIS:HA	13:AM:109:ARG:NH2	2.29	0.48
19:AS:15:LEU:HD13	19:AS:33:THR:HG21	1.96	0.48
22:BA:523:C:O2'	22:BA:524:G:H5'	2.13	0.48
22:BA:569:U:H1'	22:BA:947:A:O4'	2.14	0.48
22:BA:1688:U:N3	22:BA:1698:A:C2	2.82	0.48
22:BA:1816:C:C5	24:BC:62:TYR:CE2	3.02	0.48
22:BA:1954:G:O2'	22:BA:1956:U:O4	2.20	0.48
22:BA:2190:G:C6	22:BA:2191:A:C5	3.01	0.48
22:BA:2318:G:C5	22:BA:2319:G:C6	3.02	0.48
22:BA:2517:C:C5	22:BA:2542:A:C5	3.01	0.48
22:BA:2742:G:OP2	52:B4:24:ARG:NH1	2.47	0.48
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.13	0.48
23:BB:57:A:H2'	23:BB:58:A:O4'	2.14	0.48
24:BC:78:VAL:HG21	24:BC:110:LEU:HD21	1.95	0.48
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	1.95	0.48
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.48
49:B1:9:ILE:HG22	49:B1:53:LYS:HB2	1.96	0.48
1:CA:296:U:C4	1:CA:297:G:N7	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:765:G:N1	1:CA:812:G:H1'	2.29	0.48
1:CA:775:G:C2'	1:CA:776:G:H5'	2.43	0.48
1:CA:1034:G:H2'	1:CA:1035:A:C8	2.48	0.48
1:CA:1169:A:C6	1:CA:1170:A:C6	3.02	0.48
1:CA:1302:C:C4	13:CM:17:ILE:HD11	2.49	0.48
7:CG:60:GLU:HA	7:CG:63:GLU:HB3	1.95	0.48
10:CJ:57:VAL:HG13	10:CJ:58:ASN:N	2.29	0.48
15:CO:15:PHE:CZ	15:CO:85:LEU:HD11	2.49	0.48
17:CQ:11:ARG:HA	17:CQ:58:VAL:HA	1.95	0.48
22:DA:197:A:C8	22:DA:2430:A:N7	2.82	0.48
22:DA:358:U:N3	22:DA:359:G:N7	2.62	0.48
22:DA:500:G:N2	22:DA:502:A:C8	2.82	0.48
22:DA:582:A:N7	57:DA:3283:HOH:O	2.35	0.48
22:DA:646:U:H3'	22:DA:647:G:C4'	2.44	0.48
22:DA:825:A:H4'	22:DA:2428:G:C5	2.48	0.48
22:DA:919:U:H2'	22:DA:920:A:O4'	2.13	0.48
22:DA:1046:A:O2'	22:DA:1047:G:OP1	2.26	0.48
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.48	0.48
22:DA:1360:G:H2'	22:DA:1361:G:H5'	1.94	0.48
22:DA:1390:U:C2'	22:DA:1391:U:H5'	2.43	0.48
22:DA:1716:U:C5	22:DA:1743:G:C2	3.01	0.48
22:DA:1783:A:N1	22:DA:2587:A:N3	2.61	0.48
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.32	0.48
25:DD:84:LEU:CD1	25:DD:88:GLU:HB2	2.44	0.48
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.44	0.48
30:DI:54:PRO:HG2	30:DI:78:VAL:HG21	1.95	0.48
33:DL:92:LEU:HD23	33:DL:125:LEU:HD12	1.95	0.48
40:DS:39:THR:HG22	40:DS:39:THR:O	2.13	0.48
46:DY:28:LEU:HB3	46:DY:43:LEU:HD23	1.95	0.48
1:AA:141:G:N2	1:AA:142:G:H1'	2.29	0.48
1:AA:233:C:C2	1:AA:234:C:C5	3.02	0.48
1:AA:316:C:O2	1:AA:316:C:H2'	2.13	0.48
1:AA:451:A:C5'	16:AP:70:ARG:NH2	2.77	0.48
1:AA:974:A:OP1	14:AN:69:ARG:NH1	2.47	0.48
1:AA:979:C:H1'	1:AA:1317:C:N4	2.29	0.48
1:AA:992:U:C2	1:AA:1043:G:N7	2.82	0.48
2:AB:21:ARG:C	2:AB:23:TRP:H	2.21	0.48
2:AB:65:GLY:C	2:AB:66:LYS:HD3	2.39	0.48
2:AB:132:LYS:CG	2:AB:133:GLU:N	2.77	0.48
2:AB:144:LEU:O	2:AB:145:GLU:C	2.56	0.48
4:AD:62:ARG:NH2	4:AD:63:ARG:NH2	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.43	0.48
12:AL:24:LEU:HG	12:AL:25:GLU:N	2.28	0.48
16:AP:50:THR:O	16:AP:50:THR:HG22	2.14	0.48
16:AP:60:TRP:O	16:AP:63:GLN:N	2.45	0.48
22:BA:140:C:O2	22:BA:140:C:O4'	2.29	0.48
22:BA:657:U:H2'	22:BA:658:U:C6	2.49	0.48
22:BA:933:A:H5'	22:BA:934:U:OP2	2.14	0.48
22:BA:1112:G:C5	22:BA:1113:U:C5	3.02	0.48
22:BA:1232:G:C5	22:BA:1233:C:C5	3.02	0.48
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.48	0.48
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.13	0.48
22:BA:1675:C:N3	25:BD:133:THR:HG21	2.28	0.48
22:BA:1775:U:H2'	22:BA:1776:G:O5'	2.14	0.48
22:BA:1924:C:H2'	22:BA:1925:C:H5"	1.95	0.48
23:BB:37:C:C6	23:BB:38:C:C5	3.02	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
31:BJ:99:ARG:O	31:BJ:103:ILE:HD12	2.14	0.48
33:BL:77:ILE:CD1	33:BL:95:LEU:HD13	2.43	0.48
40:BS:47:VAL:O	40:BS:50:VAL:N	2.47	0.48
41:BT:73:ARG:NH2	41:BT:73:ARG:HB3	2.29	0.48
46:BY:49:ASP:O	46:BY:50:VAL:C	2.57	0.48
46:BY:59:GLU:HG2	46:BY:59:GLU:O	2.12	0.48
1:CA:182:A:C4	1:CA:184:G:N7	2.81	0.48
1:CA:618:C:H5"	1:CA:619:U:H5"	1.96	0.48
1:CA:857:C:H2'	1:CA:858:G:O4'	2.13	0.48
1:CA:890:G:O2'	1:CA:906:A:N6	2.45	0.48
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.77	0.48
1:CA:1291:U:OP1	7:CG:37:SER:CB	2.62	0.48
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.95	0.48
5:CE:101:GLU:O	5:CE:101:GLU:OE1	2.32	0.48
6:CF:18:VAL:O	6:CF:21:MET:N	2.46	0.48
12:CL:23:ALA:HA	12:CL:61:PHE:CD2	2.49	0.48
12:CL:25:GLU:CD	12:CL:27:CYS:SG	2.96	0.48
12:CL:82:ILE:HD11	12:CL:95:TYR:HB2	1.96	0.48
17:CQ:13:VAL:HG12	17:CQ:22:VAL:HG13	1.95	0.48
19:CS:6:LYS:HB2	19:CS:7:LYS:HE3	1.95	0.48
22:DA:67:U:C2	22:DA:68:G:C8	3.01	0.48
22:DA:125:A:H3'	50:D2:19:ARG:HG3	1.96	0.48
22:DA:224:U:C4	22:DA:225:C:C5	3.02	0.48
22:DA:489:G:C2	22:DA:491:G:H1'	2.49	0.48
22:DA:527:C:OP2	22:DA:2779:U:N3	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:627:A:O2'	33:DL:76:GLU:OE1	2.29	0.48
22:DA:629:G:H4'	22:DA:650:C:O2	2.13	0.48
22:DA:748:G:O6	22:DA:751:A:H5'	2.13	0.48
22:DA:972:A:N1	22:DA:973:A:C6	2.82	0.48
22:DA:1339:G:H5'	22:DA:1393:A:N6	2.28	0.48
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.49	0.48
22:DA:2189:U:H2'	22:DA:2190:G:H5'	1.95	0.48
22:DA:2504:U:C4	55:DA:3001:VIR:H162	2.48	0.48
22:DA:2566:A:N1	32:DK:28:SER:OG	2.33	0.48
23:DB:57:A:H1'	27:DF:27:GLN:HA	1.96	0.48
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.14	0.48
31:DJ:94:ALA:O	31:DJ:96:ARG:N	2.47	0.48
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.47	0.48
35:DN:75:ILE:O	35:DN:79:LEU:HD12	2.14	0.48
35:DN:80:PHE:O	35:DN:85:PRO:HD3	2.13	0.48
36:DO:104:GLN:O	36:DO:107:ALA:N	2.47	0.48
38:DQ:62:ILE:HG23	38:DQ:76:TYR:CE2	2.49	0.48
39:DR:81:LYS:HD3	39:DR:81:LYS:N	2.29	0.48
45:DX:54:LYS:C	45:DX:56:MET:N	2.71	0.48
1:AA:57:G:H2'	1:AA:58:C:C6	2.49	0.48
1:AA:129:A:H1'	1:AA:130:A:C8	2.49	0.48
1:AA:270:A:H2'	1:AA:271:C:C6	2.48	0.48
1:AA:328:C:O2	1:AA:328:C:C2'	2.61	0.48
1:AA:958:A:N6	1:AA:959:A:N1	2.62	0.48
1:AA:1000:A:C2	1:AA:1041:G:N2	2.81	0.48
1:AA:1138:G:C2	1:AA:1140:C:C5	3.01	0.48
1:AA:1315:U:C4	1:AA:1316:G:C5	3.02	0.48
1:AA:1360:A:C8	14:AN:58:SER:HB3	2.48	0.48
2:AB:31:ILE:HD13	2:AB:39:HIS:CD2	2.48	0.48
4:AD:190:ASP:C	4:AD:191:LEU:HG	2.38	0.48
6:AF:5:GLU:O	6:AF:6:ILE:HB	2.13	0.48
18:AR:52:GLN:OE1	18:AR:52:GLN:HA	2.13	0.48
22:BA:996:A:C2	22:BA:997:G:C8	3.01	0.48
22:BA:1860:G:C6	22:BA:1883:U:O2	2.67	0.48
22:BA:1869:G:O2'	22:BA:1872:A:N6	2.46	0.48
24:BC:157:SER:O	24:BC:158:ALA:C	2.56	0.48
25:BD:66:GLY:O	25:BD:69:ALA:HB3	2.14	0.48
39:BR:74:ILE:N	39:BR:74:ILE:CD1	2.76	0.48
53:B5:50:ILE:O	53:B5:52:PRO:HD3	2.14	0.48
53:B5:100:ILE:CG2	53:B5:104:ILE:CB	2.92	0.48
1:CA:39:G:O2'	1:CA:40:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:117:G:O6	1:CA:289:G:H1'	2.14	0.48
1:CA:879:C:H2'	1:CA:880:C:O5'	2.13	0.48
1:CA:1219:A:N6	1:CA:1220:G:O6	2.47	0.48
2:CB:130:THR:HB	2:CB:132:LYS:HB3	1.95	0.48
11:CK:46:THR:O	11:CK:50:SER:OG	2.23	0.48
11:CK:126:LYS:C	21:CU:34:ARG:CZ	2.87	0.48
18:CR:20:GLU:O	18:CR:22:ASP:N	2.46	0.48
22:DA:67:U:H2'	22:DA:68:G:O4'	2.14	0.48
22:DA:185:G:N1	22:DA:212:G:N3	2.62	0.48
22:DA:553:G:H2'	22:DA:554:U:O4'	2.13	0.48
22:DA:856:G:C2	22:DA:922:C:C2	3.02	0.48
22:DA:858:G:N2	22:DA:919:U:O4	2.45	0.48
22:DA:1354:A:C8	22:DA:1355:G:C8	3.01	0.48
22:DA:1680:U:O2'	22:DA:1763:G:N7	2.40	0.48
22:DA:1785:A:N1	22:DA:1787:A:H1'	2.28	0.48
22:DA:2418:A:H2'	22:DA:2419:U:O4'	2.13	0.48
22:DA:2615:U:C2	48:D0:4:GLN:HA	2.48	0.48
22:DA:2690:U:O2'	22:DA:2872:A:H1'	2.13	0.48
22:DA:2700:A:C2	22:DA:2708:G:C2	3.02	0.48
24:DC:160:THR:N	24:DC:195:VAL:HG13	2.28	0.48
24:DC:247:PRO:HB2	24:DC:248:TRP:CZ3	2.49	0.48
26:DE:181:ILE:HG23	33:DL:2:ARG:HD3	1.95	0.48
31:DJ:76:HIS:CE1	31:DJ:85:LYS:HB2	2.48	0.48
37:DP:31:TRP:C	37:DP:32:VAL:HG12	2.39	0.48
1:AA:49:U:O4	1:AA:365:U:H5	1.97	0.48
1:AA:652:U:O2'	1:AA:653:U:OP2	2.25	0.48
1:AA:760:G:C5	1:AA:761:G:C8	3.02	0.48
1:AA:803:G:C5	1:AA:804:U:C4	3.02	0.48
1:AA:1173:U:OP1	7:AG:5:ARG:NH1	2.47	0.48
4:AD:38:PRO:HD2	4:AD:42:GLY:HA3	1.95	0.48
6:AF:38:ARG:NH1	6:AF:99:ALA:HB3	2.29	0.48
9:AI:84:THR:HG21	9:AI:103:PHE:HB3	1.96	0.48
19:AS:5:LEU:HD23	19:AS:9:PRO:HA	1.96	0.48
22:BA:167:A:H2'	22:BA:168:G:O4'	2.13	0.48
22:BA:451:U:C2	22:BA:453:A:N7	2.82	0.48
22:BA:871:U:H2'	22:BA:872:U:C6	2.49	0.48
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.13	0.48
22:BA:1189:A:H2'	22:BA:1190:G:O4'	2.14	0.48
22:BA:1356:G:C6	22:BA:1357:C:C4	3.02	0.48
22:BA:1678:A:H2'	22:BA:1679:A:H5'	1.95	0.48
22:BA:2202:U:H5"	22:BA:2203:U:OP1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2500:U:O2	22:BA:2504:U:C4	2.67	0.48
22:BA:2636:C:H4'	25:BD:81:GLU:CD	2.39	0.48
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.43	0.48
28:BG:97:ALA:HA	28:BG:125:CYS:SG	2.54	0.48
30:BI:127:ARG:HA	30:BI:130:GLU:CG	2.43	0.48
38:BQ:108:ALA:HB1	39:BR:48:LYS:NZ	2.29	0.48
42:BU:95:PHE:CD1	42:BU:95:PHE:O	2.67	0.48
1:CA:502:A:OP1	12:CL:115:SER:CB	2.62	0.48
1:CA:504:C:O4'	1:CA:510:A:C2	2.66	0.48
1:CA:552:U:N3	1:CA:553:A:N7	2.62	0.48
1:CA:1280:A:C8	10:CJ:42:LEU:HD23	2.49	0.48
1:CA:1426:G:H2'	1:CA:1427:C:O4'	2.14	0.48
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.54	0.48
6:CF:99:ALA:O	6:CF:100:SER:HB3	2.13	0.48
7:CG:113:ASP:HB2	7:CG:119:ARG:HG3	1.96	0.48
13:CM:96:PRO:HB3	13:CM:100:GLN:NE2	2.29	0.48
21:CU:29:LEU:C	21:CU:29:LEU:HD23	2.39	0.48
22:DA:122:G:H2'	22:DA:123:G:O4'	2.13	0.48
22:DA:150:U:H2'	22:DA:151:C:C6	2.49	0.48
22:DA:389:G:N9	22:DA:2413:G:H4'	2.29	0.48
22:DA:572:A:H5"	22:DA:573:U:OP2	2.14	0.48
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.14	0.48
22:DA:1545:A:C8	22:DA:1546:G:C8	3.02	0.48
22:DA:2195:U:C2	22:DA:2196:C:C6	3.02	0.48
22:DA:2350:C:H2'	22:DA:2351:G:O4'	2.13	0.48
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.43	0.48
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.48	0.48
22:DA:2706:A:C2	22:DA:2707:U:C2	3.02	0.48
22:DA:2747:G:O6	22:DA:2755:C:H5"	2.13	0.48
24:DC:147:LYS:O	24:DC:150:LYS:HB3	2.13	0.48
26:DE:150:THR:C	26:DE:192:ALA:HB2	2.38	0.48
1:AA:105:G:H2'	1:AA:106:C:C6	2.49	0.47
1:AA:350:G:O2'	1:AA:351:G:H5'	2.14	0.47
1:AA:373:A:N3	1:AA:374:A:C8	2.82	0.47
1:AA:409:U:OP1	4:AD:24:GLY:HA3	2.14	0.47
1:AA:451:A:C2	1:AA:480:U:C4	3.02	0.47
1:AA:598:U:H4'	8:AH:86:TYR:CD2	2.49	0.47
1:AA:645:G:C5	1:AA:646:G:N7	2.82	0.47
1:AA:781:A:C5	1:AA:802:A:C2	3.02	0.47
1:AA:842:U:H3'	1:AA:843:U:C5'	2.43	0.47
1:AA:1167:A:N7	1:AA:1169:A:C6	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1191:A:OP2	3:AC:3:GLN:NE2	2.47	0.47
1:AA:1197:A:OP1	1:AA:1198:G:OP2	2.32	0.47
1:AA:1307:U:C2	1:AA:1308:U:C5	3.02	0.47
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.82	0.47
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.14	0.47
1:AA:1539:C:O3'	21:AU:18:ARG:HB3	2.14	0.47
2:AB:53:ALA:O	2:AB:57:LEU:HB2	2.13	0.47
2:AB:96:TRP:CZ3	2:AB:175:GLU:OE2	2.67	0.47
2:AB:151:ILE:HG23	2:AB:152:LYS:N	2.28	0.47
3:AC:22:TRP:CZ2	3:AC:32:ASN:HB3	2.49	0.47
7:AG:75:VAL:HB	7:AG:86:GLN:HG3	1.95	0.47
10:AJ:49:PHE:CD2	14:AN:77:PHE:CE2	3.02	0.47
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.14	0.47
22:BA:215:G:H4'	22:BA:216:A:H4'	1.96	0.47
22:BA:468:G:C6	22:BA:469:G:C4	3.02	0.47
22:BA:1011:G:H1'	22:BA:1013:C:O4'	2.14	0.47
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.29	0.47
22:BA:1487:U:C2	22:BA:1503:A:C2	3.01	0.47
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.14	0.47
22:BA:2334:U:O4	36:BO:16:ARG:HD3	2.14	0.47
24:BC:75:PRO:HG2	24:BC:97:LYS:HD2	1.96	0.47
29:BH:91:PHE:O	1:CA:55:A:C6	2.67	0.47
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.13	0.47
33:BL:131:ALA:O	33:BL:132:ARG:C	2.56	0.47
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	1.95	0.47
36:BO:103:VAL:O	36:BO:106:LEU:N	2.47	0.47
53:B5:44:VAL:HG23	53:B5:179:ALA:HB2	1.97	0.47
1:CA:412:A:O2'	1:CA:413:G:H4'	2.14	0.47
1:CA:790:A:N6	1:CA:791:G:C6	2.82	0.47
4:CD:203:LEU:C	4:CD:203:LEU:HD12	2.39	0.47
9:CI:31:ASN:HA	9:CI:66:THR:HG22	1.95	0.47
11:CK:97:ILE:HG13	11:CK:98:ARG:N	2.29	0.47
16:CP:56:ARG:O	16:CP:59:HIS:N	2.46	0.47
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.47	0.47
22:DA:35:G:N2	22:DA:450:G:H1'	2.29	0.47
22:DA:35:G:C4	22:DA:454:A:C2	3.02	0.47
22:DA:56:A:C2	22:DA:115:C:C2	3.02	0.47
22:DA:161:A:P	22:DA:162:U:H3'	2.53	0.47
22:DA:189:G:OP1	45:DX:26:LYS:HE2	2.13	0.47
22:DA:511:U:O2'	22:DA:1215:G:N2	2.46	0.47
22:DA:513:A:C2	22:DA:514:A:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:671:C:C2'	22:DA:672:C:O5'	2.61	0.47
22:DA:694:U:C3'	22:DA:695:G:H5"	2.44	0.47
22:DA:845:A:H3'	22:DA:845:A:N3	2.30	0.47
22:DA:1432:G:C2	22:DA:1433:A:C4	3.02	0.47
22:DA:1806:C:N4	22:DA:1807:G:C5	2.82	0.47
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.97	0.47
22:DA:2823:A:C5	22:DA:2824:C:C5	3.01	0.47
26:DE:173:THR:HG23	26:DE:199:MET:SD	2.54	0.47
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.47
32:DK:73:ASP:O	37:DP:75:GLN:HG3	2.14	0.47
35:DN:58:ASP:OD1	35:DN:63:ARG:HD2	2.13	0.47
37:DP:29:LYS:HB3	37:DP:40:LEU:CD2	2.43	0.47
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.43	0.47
41:DT:51:PHE:O	41:DT:53:VAL:HG22	2.14	0.47
1:AA:39:G:N3	1:AA:40:C:C6	2.82	0.47
1:AA:365:U:H5"	1:AA:366:A:OP1	2.13	0.47
1:AA:444:G:C6	1:AA:445:G:N7	2.82	0.47
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.50	0.47
2:AB:21:ARG:O	2:AB:22:TYR:C	2.54	0.47
2:AB:167:ASP:C	2:AB:169:GLU:N	2.71	0.47
4:AD:123:ILE:HD13	4:AD:123:ILE:H	1.78	0.47
4:AD:153:SER:O	4:AD:155:VAL:N	2.47	0.47
5:AE:136:VAL:O	5:AE:140:THR:OG1	2.32	0.47
6:AF:15:SER:O	6:AF:18:VAL:HG23	2.14	0.47
22:BA:417:C:O2'	22:BA:418:C:H5'	2.14	0.47
22:BA:458:G:O2'	22:BA:469:G:O6	2.25	0.47
22:BA:646:U:H5'	22:BA:647:G:H5"	1.96	0.47
22:BA:674:G:H1'	26:BE:69:ARG:HD3	1.96	0.47
22:BA:995:C:H5'	22:BA:995:C:H6	1.78	0.47
22:BA:1789:A:OP2	24:BC:221:ARG:NH1	2.47	0.47
22:BA:2249:U:H4'	22:BA:2250:G:OP2	2.14	0.47
22:BA:2749:A:OP1	28:BG:2:SER:N	2.47	0.47
23:BB:22:U:H2'	23:BB:23:G:C8	2.48	0.47
24:BC:15:HIS:O	24:BC:204:VAL:HG21	2.14	0.47
26:BE:128:ALA:HB1	26:BE:129:PRO:HD2	1.96	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
45:BX:45:ARG:HG2	45:BX:46:PHE:N	2.30	0.47
1:CA:380:G:N2	1:CA:383:A:OP2	2.45	0.47
1:CA:406:G:C2	1:CA:407:U:C5	3.02	0.47
2:CB:164:ILE:HG23	2:CB:165:ASP:N	2.29	0.47
5:CE:151:GLU:O	5:CE:154:ALA:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:148:ASN:C	7:CG:150:ALA:N	2.72	0.47
13:CM:54:ASP:HA	13:CM:57:ARG:HB3	1.95	0.47
14:CN:41:ARG:NH2	14:CN:43:ASN:OD1	2.47	0.47
20:CT:5:LYS:O	20:CT:6:SER:C	2.57	0.47
22:DA:38:A:H2'	22:DA:39:G:O4'	2.14	0.47
22:DA:53:A:N7	22:DA:54:G:N7	2.61	0.47
22:DA:141:G:H3'	22:DA:142:A:C8	2.48	0.47
22:DA:228:C:C5'	22:DA:229:C:C6	2.97	0.47
22:DA:269:C:O2	22:DA:269:C:H2'	2.14	0.47
22:DA:451:U:H2'	22:DA:453:A:N7	2.30	0.47
22:DA:686:U:H2'	22:DA:788:A:N1	2.29	0.47
22:DA:693:A:C6	22:DA:694:U:C4	3.03	0.47
22:DA:1060:U:OP2	30:DI:75:PRO:HA	2.14	0.47
22:DA:1360:G:C2'	22:DA:1361:G:H5'	2.44	0.47
22:DA:2262:U:OP2	44:DW:16:SER:HB2	2.14	0.47
22:DA:2599:G:N7	24:DC:235:GLY:O	2.47	0.47
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.47	0.47
24:DC:147:LYS:HB2	24:DC:150:LYS:CB	2.44	0.47
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.47
30:DI:24:VAL:CG2	30:DI:28:LEU:HD23	2.45	0.47
30:DI:75:PRO:HG2	30:DI:78:VAL:HG21	1.96	0.47
31:DJ:13:ARG:HG2	31:DJ:51:GLY:O	2.15	0.47
31:DJ:15:TRP:O	31:DJ:137:PRO:HA	2.14	0.47
31:DJ:84:ILE:HG23	31:DJ:84:ILE:O	2.13	0.47
32:DK:108:ARG:HD3	32:DK:113:MET:HE1	1.96	0.47
35:DN:31:HIS:O	35:DN:33:ILE:HG22	2.13	0.47
38:DQ:94:ILE:HD13	39:DR:11:GLN:HB2	1.96	0.47
42:DU:13:VAL:HG21	42:DU:39:ILE:HG23	1.95	0.47
1:AA:57:G:H2'	1:AA:58:C:O4'	2.14	0.47
1:AA:181:A:N6	1:AA:195:A:C8	2.83	0.47
1:AA:503:C:O5'	1:AA:503:C:H6	1.97	0.47
1:AA:578:C:P	57:AA:1739:HOH:O	2.73	0.47
1:AA:624:C:H4'	16:AP:11:ALA:HB2	1.96	0.47
1:AA:986:U:C2	1:AA:987:G:C8	3.02	0.47
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.66	0.47
2:AB:95:ARG:HG2	2:AB:95:ARG:HH11	1.78	0.47
2:AB:111:ILE:N	2:AB:111:ILE:CD1	2.78	0.47
6:AF:90:MET:O	6:AF:91:ARG:O	2.32	0.47
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.38	0.47
16:AP:51:ARG:CZ	16:AP:51:ARG:HB3	2.44	0.47
17:AQ:53:CYS:SG	17:AQ:75:LEU:CD2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:55:G:C2	22:BA:56:A:C8	3.02	0.47
22:BA:419:U:H2'	22:BA:420:C:C6	2.49	0.47
22:BA:1031:G:H4'	52:B4:6:SER:HB2	1.96	0.47
22:BA:1185:G:H5"	22:BA:1186:G:OP1	2.15	0.47
22:BA:1299:G:H8	22:BA:1299:G:O5'	1.98	0.47
22:BA:1374:G:C5	22:BA:1375:U:C5	3.02	0.47
28:BG:52:PHE:CE1	28:BG:69:ARG:HA	2.49	0.47
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.49	0.47
41:BT:49:LYS:N	41:BT:49:LYS:HD3	2.29	0.47
46:BY:9:LYS:HE2	46:BY:11:VAL:CG2	2.44	0.47
1:CA:636:U:H2'	1:CA:637:C:C6	2.49	0.47
1:CA:718:A:H5'	11:CK:119:ASN:CG	2.39	0.47
1:CA:913:A:H4'	1:CA:914:A:OP1	2.14	0.47
1:CA:1028:C:C6	1:CA:1034:G:N2	2.83	0.47
8:CH:83:LEU:HD22	8:CH:83:LEU:C	2.39	0.47
9:CI:17:ALA:HB2	9:CI:67:VAL:HB	1.96	0.47
10:CJ:35:GLN:O	10:CJ:36:VAL:CB	2.61	0.47
11:CK:72:ASP:O	11:CK:73:ALA:HB3	2.14	0.47
17:CQ:45:HIS:O	17:CQ:71:LYS:HA	2.14	0.47
22:DA:45:G:H4'	22:DA:46:G:O4'	2.15	0.47
22:DA:358:U:C2	22:DA:359:G:C8	3.02	0.47
22:DA:463:G:N2	22:DA:466:A:OP2	2.33	0.47
22:DA:547:A:H3'	22:DA:548:G:H5'	1.95	0.47
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.15	0.47
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.13	0.47
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.30	0.47
22:DA:1469:A:C2	22:DA:1470:A:C4	3.03	0.47
22:DA:1799:G:N1	22:DA:1819:A:OP2	2.36	0.47
22:DA:1813:G:H2'	22:DA:1814:G:O4'	2.14	0.47
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.43	0.47
22:DA:2518:A:N3	22:DA:2518:A:H2'	2.29	0.47
22:DA:2571:U:C4	22:DA:2574:G:C8	3.02	0.47
22:DA:2861:U:C2	22:DA:2862:G:C8	3.02	0.47
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
32:DK:92:GLU:O	32:DK:93:GLN:CB	2.62	0.47
33:DL:81:ASP:O	33:DL:82:LEU:CD2	2.63	0.47
37:DP:54:GLY:O	37:DP:77:HIS:NE2	2.46	0.47
37:DP:89:ARG:HD2	37:DP:113:ARG:CZ	2.44	0.47
49:D1:12:VAL:C	49:D1:49:TYR:CD2	2.92	0.47
1:AA:57:G:C5	1:AA:58:C:C4	3.02	0.47
1:AA:198:G:C5	1:AA:220:G:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:262:A:H2'	1:AA:263:A:C8	2.49	0.47
1:AA:695:A:N1	1:AA:696:A:C2	2.82	0.47
1:AA:1073:U:O2'	2:AB:103:ASN:OD1	2.29	0.47
2:AB:56:GLU:HA	2:AB:59:LYS:HB3	1.96	0.47
2:AB:91:PHE:CE1	2:AB:150:GLY:CA	2.97	0.47
6:AF:6:ILE:C	6:AF:7:VAL:HG12	2.39	0.47
11:AK:27:PHE:CE2	11:AK:89:PRO:HG2	2.49	0.47
11:AK:88:GLY:N	11:AK:114:THR:HG22	2.29	0.47
12:AL:51:LYS:CD	12:AL:51:LYS:N	2.76	0.47
13:AM:51:GLY:O	13:AM:55:THR:HG23	2.14	0.47
14:AN:20:TYR:O	14:AN:23:LYS:HB3	2.14	0.47
18:AR:48:ARG:N	18:AR:48:ARG:CD	2.77	0.47
21:AU:37:PHE:HB3	21:AU:41:PRO:CG	2.44	0.47
22:BA:999:U:H5"	22:BA:1154:G:O6	2.14	0.47
22:BA:1064:C:O2	22:BA:1064:C:H2'	2.13	0.47
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.14	0.47
23:BB:14:U:O2	23:BB:107:G:H4'	2.14	0.47
25:BD:4:LEU:HD22	25:BD:101:PHE:HE1	1.79	0.47
27:BF:14:LYS:O	27:BF:18:THR:HG22	2.15	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47
41:BT:1:MET:HB2	41:BT:2:ILE:HD12	1.97	0.47
48:B0:41:HIS:HA	48:B0:49:TYR:OH	2.14	0.47
49:B1:11:LEU:HD23	49:B1:11:LEU:N	2.29	0.47
1:CA:207:C:O2'	1:CA:213:G:N2	2.47	0.47
1:CA:377:G:O2'	1:CA:378:G:H5'	2.14	0.47
1:CA:600:A:C2	1:CA:639:G:C4	3.03	0.47
1:CA:604:G:C6	1:CA:605:U:N3	2.82	0.47
1:CA:756:C:C2'	1:CA:757:U:H5'	2.45	0.47
1:CA:1074:G:H4'	2:CB:103:ASN:CB	2.43	0.47
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.49	0.47
2:CB:99:GLY:O	2:CB:103:ASN:N	2.46	0.47
2:CB:102:THR:HB	2:CB:175:GLU:HG2	1.97	0.47
5:CE:157:ARG:C	5:CE:159:LYS:N	2.72	0.47
9:CI:51:PRO:HB3	9:CI:84:THR:HG23	1.96	0.47
12:CL:21:VAL:HG12	12:CL:95:TYR:CE1	2.49	0.47
14:CN:16:LEU:HB3	14:CN:55:SER:HA	1.96	0.47
14:CN:62:ASN:HB3	14:CN:73:PHE:CD2	2.49	0.47
19:CS:75:ALA:N	19:CS:76:PRO:HD3	2.28	0.47
22:DA:9:G:C6	22:DA:2629:U:C6	3.03	0.47
22:DA:56:A:C2	22:DA:57:C:C2	3.03	0.47
22:DA:228:C:H4'	22:DA:229:C:H5"	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:301:G:C2	22:DA:302:C:N3	2.83	0.47
22:DA:319:G:O2'	22:DA:320:A:H5'	2.15	0.47
22:DA:454:A:H4'	22:DA:455:C:OP2	2.14	0.47
22:DA:590:A:C5	22:DA:591:U:C5	3.02	0.47
22:DA:600:G:OP1	26:DE:24:ASN:ND2	2.45	0.47
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.14	0.47
22:DA:2110:G:C6	22:DA:2120:G:C8	3.02	0.47
22:DA:2300:C:C2	22:DA:2317:A:C2	3.03	0.47
22:DA:2744:G:C6	22:DA:2761:A:C6	3.02	0.47
24:DC:157:SER:O	24:DC:158:ALA:C	2.57	0.47
24:DC:176:LEU:HD12	24:DC:180:GLU:HB3	1.96	0.47
28:DG:111:HIS:ND1	28:DG:111:HIS:O	2.47	0.47
33:DL:85:VAL:O	33:DL:86:GLU:HB3	2.14	0.47
39:DR:49:ILE:HG22	39:DR:53:PHE:C	2.37	0.47
51:D3:31:HIS:ND1	51:D3:31:HIS:C	2.72	0.47
1:AA:19:A:C2	1:AA:917:G:C4	3.02	0.47
1:AA:178:C:H2'	1:AA:179:A:O4'	2.14	0.47
1:AA:178:C:OP2	20:AT:60:ARG:NH2	2.48	0.47
1:AA:200:G:C2	1:AA:218:U:O2	2.67	0.47
1:AA:392:C:C2	1:AA:393:A:C8	3.02	0.47
1:AA:810:C:O2	1:AA:810:C:H2'	2.14	0.47
1:AA:844:G:N1	1:AA:846:G:O2'	2.47	0.47
1:AA:895:G:H2'	1:AA:896:C:C6	2.49	0.47
1:AA:965:U:C2	1:AA:969:A:C2	3.03	0.47
1:AA:1082:A:C2	1:AA:1083:U:C2	3.02	0.47
1:AA:1328:C:H2'	1:AA:1329:A:O4'	2.15	0.47
4:AD:157:ALA:O	4:AD:161:LEU:HD22	2.15	0.47
5:AE:108:GLY:O	5:AE:110:ALA:N	2.48	0.47
6:AF:40:GLU:HB2	6:AF:61:LEU:HB3	1.97	0.47
10:AJ:53:ILE:HD11	14:AN:85:ARG:NH1	2.29	0.47
11:AK:30:THR:HG21	11:AK:91:PRO:O	2.15	0.47
11:AK:126:LYS:CA	21:AU:34:ARG:NH2	2.76	0.47
12:AL:23:ALA:C	12:AL:24:LEU:O	2.57	0.47
13:AM:88:GLY:O	13:AM:89:LEU:C	2.57	0.47
15:AO:63:ARG:HG2	15:AO:67:LEU:CD1	2.43	0.47
17:AQ:81:LYS:N	17:AQ:81:LYS:HD3	2.29	0.47
19:AS:29:LYS:O	19:AS:30:PRO:O	2.32	0.47
19:AS:58:VAL:CG1	19:AS:75:ALA:HB1	2.44	0.47
20:AT:5:LYS:C	20:AT:5:LYS:HE2	2.39	0.47
22:BA:45:G:H5'	22:BA:46:G:OP1	2.15	0.47
22:BA:61:C:C2	22:BA:94:A:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:221:A:C8	22:BA:266:G:O6	2.66	0.47
22:BA:999:U:H5	22:BA:1154:G:C5	2.29	0.47
22:BA:1000:A:C4	22:BA:1155:A:C6	3.02	0.47
22:BA:1188:U:H2'	22:BA:1189:A:H5'	1.95	0.47
22:BA:1359:A:C8	22:BA:1373:A:C2	3.02	0.47
22:BA:1378:A:O2'	22:BA:1380:G:N7	2.47	0.47
22:BA:1414:C:C5	22:BA:1415:U:H5	2.33	0.47
22:BA:2259:U:C6	22:BA:2427:C:C4	3.02	0.47
22:BA:2531:A:C6	22:BA:2532:G:C5	3.03	0.47
23:BB:15:A:C8	23:BB:109:A:C6	3.02	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
46:BY:23:ARG:O	46:BY:24:GLU:C	2.57	0.47
53:B5:78:ILE:HG23	53:B5:78:ILE:O	2.14	0.47
1:CA:78:A:C2	1:CA:92:U:O2	2.67	0.47
1:CA:562:U:H1'	12:CL:12:ARG:HG3	1.96	0.47
1:CA:608:A:H2'	1:CA:609:A:O4'	2.14	0.47
1:CA:716:A:C6	1:CA:717:U:N3	2.82	0.47
1:CA:1226:C:C4	13:CM:103:LYS:HA	2.49	0.47
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.14	0.47
3:CC:181:ASP:OD2	3:CC:204:LYS:HB2	2.14	0.47
9:CI:28:ILE:CB	9:CI:35:LEU:HB2	2.45	0.47
13:CM:68:ASP:O	13:CM:72:GLU:HG3	2.13	0.47
22:DA:134:G:N2	22:DA:146:A:N3	2.63	0.47
22:DA:751:A:C6	22:DA:789:A:C6	3.03	0.47
22:DA:1350:C:N3	22:DA:1382:G:C2	2.82	0.47
22:DA:1355:G:C2'	22:DA:1356:G:H5'	2.43	0.47
22:DA:1638:C:H5"	22:DA:2710:C:O2'	2.14	0.47
22:DA:1754:A:N1	22:DA:2716:C:O2'	2.47	0.47
22:DA:2094:A:H4'	29:DH:25:TYR:CE1	2.49	0.47
22:DA:2371:G:C2	22:DA:2372:U:C5	3.02	0.47
22:DA:2624:G:C2'	22:DA:2625:G:H5'	2.45	0.47
24:DC:67:PHE:CE2	24:DC:156:ARG:CZ	2.97	0.47
26:DE:72:SER:O	26:DE:74:LYS:N	2.46	0.47
27:DF:31:VAL:CG1	27:DF:97:TRP:CH2	2.98	0.47
35:DN:106:ASP:C	35:DN:106:ASP:OD1	2.57	0.47
40:DS:7:HIS:HB2	40:DS:50:VAL:HG21	1.96	0.47
1:AA:90:C:N3	1:AA:91:U:C5	2.82	0.47
1:AA:223:A:C6	1:AA:224:U:C4	3.03	0.47
1:AA:557:G:H2'	1:AA:558:G:C8	2.49	0.47
1:AA:953:G:C2'	1:AA:954:G:H5'	2.45	0.47
1:AA:989:U:C2'	1:AA:990:C:O5'	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1210:C:N4	1:AA:1211:U:C4	2.82	0.47
1:AA:1353:G:N3	1:AA:1354:U:C6	2.83	0.47
1:AA:1371:G:OP1	9:AI:13:LYS:HD3	2.14	0.47
3:AC:36:ASP:O	3:AC:39:VAL:HG22	2.15	0.47
3:AC:205:GLY:O	3:AC:206:GLU:CG	2.61	0.47
5:AE:101:GLU:O	5:AE:101:GLU:CD	2.58	0.47
6:AF:18:VAL:N	6:AF:19:PRO:CD	2.77	0.47
8:AH:5:ASP:OD2	8:AH:8:ALA:HB2	2.15	0.47
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	1.96	0.47
10:AJ:25:ILE:O	10:AJ:26:VAL:C	2.57	0.47
10:AJ:92:LEU:O	10:AJ:93:ALA:HB3	2.14	0.47
12:AL:35:THR:C	12:AL:36:ARG:HD2	2.40	0.47
13:AM:16:VAL:HG13	13:AM:34:LEU:HD13	1.97	0.47
17:AQ:45:HIS:CB	17:AQ:70:THR:HG23	2.45	0.47
20:AT:44:LYS:HG2	20:AT:87:ALA:HA	1.97	0.47
22:BA:181:A:C2	22:BA:182:A:C4	3.02	0.47
22:BA:651:G:C2'	22:BA:652:U:H5'	2.45	0.47
22:BA:1047:G:N2	22:BA:1110:G:C4	2.82	0.47
22:BA:1171:G:C6	22:BA:1172:C:N3	2.83	0.47
22:BA:1548:A:H2'	22:BA:1549:A:C8	2.50	0.47
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.62	0.47
22:BA:2298:A:N6	22:BA:2318:G:H1'	2.29	0.47
22:BA:2502:G:C5'	22:BA:2503:A:C5'	2.92	0.47
35:BN:9:GLN:O	35:BN:10:LEU:C	2.58	0.47
41:BT:41:ALA:O	41:BT:44:LYS:N	2.48	0.47
43:BV:47:VAL:O	43:BV:50:MET:HB2	2.15	0.47
44:BW:28:GLY:O	44:BW:66:LYS:HG2	2.14	0.47
47:BZ:47:MET:O	47:BZ:51:VAL:HG22	2.15	0.47
1:CA:519:C:H2'	1:CA:520:A:O4'	2.13	0.47
1:CA:607:A:N1	1:CA:608:A:C2	2.82	0.47
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.96	0.47
1:CA:892:A:C2	1:CA:907:A:C4	3.03	0.47
1:CA:1345:U:C2	1:CA:1377:A:N1	2.82	0.47
2:CB:17:GLY:O	2:CB:40:ILE:HA	2.14	0.47
2:CB:217:VAL:HG12	2:CB:218:ALA:N	2.29	0.47
7:CG:69:VAL:HG12	7:CG:134:ALA:O	2.15	0.47
13:CM:43:VAL:HG23	13:CM:43:VAL:O	2.15	0.47
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.45	0.47
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD13	1.95	0.47
22:DA:669:G:N2	22:DA:670:A:C2	2.83	0.47
22:DA:802:A:C5	22:DA:803:U:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:822:G:H5"	57:DA:3341:HOH:O	2.14	0.47
22:DA:995:C:C6	38:DQ:57:PHE:CE2	3.02	0.47
22:DA:1034:G:C6	22:DA:1035:U:C4	3.02	0.47
22:DA:2119:A:N1	22:DA:2170:A:C5	2.83	0.47
22:DA:2186:G:C5	22:DA:2187:U:C4	3.03	0.47
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.14	0.47
27:DF:16:LEU:HD11	27:DF:169:LEU:CD1	2.44	0.47
30:DI:8:TYR:CD1	30:DI:8:TYR:O	2.68	0.47
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.30	0.47
31:DJ:39:LYS:HA	31:DJ:39:LYS:HE3	1.95	0.47
39:DR:58:VAL:HG22	39:DR:58:VAL:O	2.15	0.47
1:AA:196:A:N3	1:AA:222:C:H1'	2.29	0.47
1:AA:202:G:O2'	1:AA:468:A:C8	2.68	0.47
1:AA:600:A:C2	1:AA:601:G:C4	3.03	0.47
1:AA:655:A:C2	1:AA:656:G:C4	3.02	0.47
1:AA:774:G:C4	1:AA:775:G:C8	3.03	0.47
1:AA:1371:G:P	9:AI:13:LYS:HD3	2.55	0.47
2:AB:103:ASN:O	2:AB:106:THR:O	2.33	0.47
2:AB:154:MET:HE3	2:AB:158:PRO:HG3	1.97	0.47
3:AC:22:TRP:CB	3:AC:59:ARG:HG2	2.44	0.47
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.15	0.47
3:AC:156:ARG:HD3	3:AC:193:TYR:O	2.15	0.47
9:AI:88:MET:HG2	9:AI:89:GLU:N	2.30	0.47
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.44	0.47
12:AL:44:LYS:HB2	12:AL:45:PRO:HD3	1.93	0.47
12:AL:88:LYS:O	12:AL:89:ASP:HB2	2.15	0.47
15:AO:35:GLN:HB3	15:AO:59:MET:HE1	1.96	0.47
17:AQ:16:LYS:O	17:AQ:16:LYS:CG	2.63	0.47
17:AQ:34:TYR:O	17:AQ:36:LYS:N	2.48	0.47
19:AS:22:ALA:O	19:AS:26:GLY:N	2.39	0.47
20:AT:67:ILE:HD11	20:AT:71:LYS:CE	2.45	0.47
22:BA:26:G:C6	22:BA:27:G:N1	2.82	0.47
22:BA:57:C:H2'	22:BA:58:G:O4'	2.15	0.47
22:BA:138:U:OP2	22:BA:139:U:H2'	2.14	0.47
22:BA:250:G:C6	22:BA:251:A:C5	3.02	0.47
22:BA:798:G:O6	57:BA:3323:HOH:O	2.20	0.47
22:BA:817:C:P	57:BA:3584:HOH:O	2.72	0.47
22:BA:1447:C:H2'	22:BA:1448:G:C8	2.50	0.47
22:BA:1450:G:N2	22:BA:1452:G:O6	2.47	0.47
22:BA:1499:C:C2'	22:BA:1500:G:H5'	2.45	0.47
22:BA:1717:A:C5	22:BA:1718:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1846:G:O3'	22:BA:1847:A:O4'	2.33	0.47
22:BA:1856:U:O4	22:BA:1857:G:C6	2.68	0.47
22:BA:1916:A:C2'	22:BA:1917:U:H4'	2.44	0.47
22:BA:2009:A:OP1	40:BS:41:LYS:HE2	2.14	0.47
22:BA:2065:C:H2'	22:BA:2066:C:H6	1.80	0.47
22:BA:2180:U:H5"	22:BA:2181:U:OP2	2.14	0.47
22:BA:2286:G:C4'	22:BA:2287:A:O5'	2.63	0.47
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.80	0.47
24:BC:144:VAL:HG12	24:BC:145:GLU:O	2.15	0.47
24:BC:171:TYR:CD1	24:BC:185:GLU:HA	2.49	0.47
24:BC:184:VAL:CG1	24:BC:188:CYS:SG	3.02	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
33:BL:97:ALA:C	33:BL:99:ASN:H	2.22	0.47
35:BN:12:ARG:NH1	35:BN:20:MET:HE1	2.30	0.47
35:BN:36:THR:HG23	35:BN:37:THR:O	2.15	0.47
35:BN:64:ARG:O	35:BN:67:PHE:N	2.48	0.47
36:BO:43:ASN:OD1	36:BO:45:SER:CB	2.62	0.47
39:BR:49:ILE:HB	39:BR:52:PRO:HA	1.97	0.47
42:BU:26:LYS:N	42:BU:35:ILE:O	2.47	0.47
44:BW:22:GLY:N	44:BW:39:ARG:O	2.44	0.47
46:BY:7:ARG:O	46:BY:7:ARG:HG3	2.14	0.47
49:B1:17:THR:HG21	49:B1:43:VAL:HG13	1.96	0.47
1:CA:36:C:OP1	12:CL:120:LYS:HE3	2.15	0.47
1:CA:49:U:O4	1:CA:365:U:H5	1.98	0.47
1:CA:68:G:N2	1:CA:152:A:H1'	2.29	0.47
1:CA:157:U:O2'	1:CA:158:G:H5'	2.15	0.47
1:CA:264:C:H2'	1:CA:265:G:O4'	2.14	0.47
1:CA:604:G:N7	1:CA:605:U:C5	2.83	0.47
1:CA:664:G:H2'	1:CA:666:G:OP1	2.14	0.47
1:CA:667:G:C2	1:CA:740:U:O2	2.68	0.47
1:CA:706:A:H1'	11:CK:31:ILE:HD11	1.95	0.47
1:CA:821:G:H2'	1:CA:822:U:H6	1.79	0.47
1:CA:1073:U:H5'	1:CA:1074:G:OP2	2.15	0.47
1:CA:1076:U:C2	1:CA:1082:A:C2	3.03	0.47
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.49	0.47
5:CE:83:HIS:NE2	8:CH:96:MET:HE3	2.29	0.47
7:CG:25:LYS:O	7:CG:29:ILE:HG12	2.13	0.47
7:CG:46:ALA:HB2	7:CG:117:ALA:HA	1.97	0.47
7:CG:151:PHE:O	7:CG:152:ALA:CB	2.63	0.47
8:CH:88:ARG:O	8:CH:89:LYS:HB3	2.15	0.47
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.40	0.47
12:CL:3:THR:O	12:CL:4:VAL:C	2.57	0.47
17:CQ:4:LYS:HG2	17:CQ:5:ILE:N	2.28	0.47
19:CS:55:ARG:CZ	19:CS:79:THR:CG2	2.92	0.47
20:CT:60:ARG:O	20:CT:64:LYS:HB2	2.15	0.47
22:DA:30:G:C6	22:DA:31:C:N3	2.83	0.47
22:DA:52:A:N3	22:DA:178:G:N2	2.51	0.47
22:DA:155:A:H2'	22:DA:156:A:C8	2.50	0.47
22:DA:183:C:O2'	22:DA:432:A:O2'	2.33	0.47
22:DA:542:C:N3	22:DA:551:G:O6	2.48	0.47
22:DA:654:A:H3'	22:DA:654:A:N3	2.30	0.47
22:DA:703:U:C5	22:DA:704:G:C5	3.03	0.47
22:DA:819:A:C8	22:DA:1188:U:O4	2.68	0.47
22:DA:867:C:C5	22:DA:868:U:C5	3.03	0.47
22:DA:1006:C:P	57:DA:3777:HOH:O	2.72	0.47
22:DA:1061:U:O2'	22:DA:1063:G:OP2	2.32	0.47
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.49	0.47
22:DA:1177:G:H2'	22:DA:1178:C:O4'	2.14	0.47
22:DA:1208:C:C4	22:DA:1209:U:C4	3.03	0.47
22:DA:1306:C:C2	22:DA:1307:A:C8	3.03	0.47
22:DA:1494:A:C2	22:DA:1495:A:C4	3.03	0.47
22:DA:1526:C:C4	22:DA:1527:G:C5	3.03	0.47
22:DA:1817:G:H2'	22:DA:1818:U:H5'	1.95	0.47
22:DA:1847:A:O2'	22:DA:1848:A:P	2.73	0.47
22:DA:1847:A:C2'	22:DA:1848:A:OP2	2.63	0.47
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.44	0.47
22:DA:2341:G:C6	22:DA:2342:C:C4	3.03	0.47
22:DA:2419:U:O4	57:DA:3661:HOH:O	2.20	0.47
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.14	0.47
22:DA:2799:A:O2'	22:DA:2800:A:H5"	2.15	0.47
24:DC:2:ALA:CA	24:DC:199:GLU:OE1	2.62	0.47
24:DC:130:LEU:CD1	24:DC:135:ILE:HG13	2.44	0.47
24:DC:130:LEU:HD12	24:DC:135:ILE:HG13	1.96	0.47
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.30	0.47
27:DF:176:PRO:O	27:DF:177:PHE:HB2	2.14	0.47
28:DG:133:LEU:CD1	28:DG:141:ILE:HB	2.44	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
32:DK:1:MET:HB2	32:DK:67:LYS:HG3	1.96	0.47
35:DN:2:ARG:O	35:DN:3:HIS:C	2.57	0.47
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.29	0.47
39:DR:69:GLY:O	39:DR:70:GLU:C	2.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:17:SER:O	41:DT:20:ALA:N	2.47	0.47
41:DT:21:SER:O	41:DT:22:THR:C	2.57	0.47
41:DT:45:ALA:O	41:DT:49:LYS:HG2	2.15	0.47
44:DW:38:VAL:HG21	44:DW:80:ILE:CD1	2.45	0.47
46:DY:23:ARG:NH1	46:DY:27:ASN:OD1	2.48	0.47
51:D3:7:VAL:O	51:D3:10:ALA:HB3	2.15	0.47
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.30	0.47
1:AA:205:A:H2'	1:AA:205:A:N3	2.29	0.47
1:AA:451:A:C5'	16:AP:70:ARG:HH22	2.28	0.47
1:AA:901:A:C5	1:AA:902:G:H1'	2.49	0.47
1:AA:1250:A:H2'	1:AA:1251:A:O4'	2.15	0.47
1:AA:1319:A:C8	1:AA:1323:G:C6	3.02	0.47
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.79	0.47
1:AA:1492:A:OP1	12:AL:44:LYS:HA	2.14	0.47
2:AB:82:ASP:O	2:AB:83:ALA:C	2.58	0.47
2:AB:161:LEU:HD12	2:AB:181:ILE:HG21	1.96	0.47
3:AC:103:ILE:HD12	3:AC:103:ILE:O	2.15	0.47
5:AE:16:ILE:HD13	5:AE:137:VAL:HG11	1.96	0.47
6:AF:46:GLN:HA	6:AF:56:LYS:HG2	1.96	0.47
8:AH:39:VAL:CG1	8:AH:112:THR:HG22	2.44	0.47
8:AH:125:ILE:HD11	8:AH:128:TYR:CE1	2.50	0.47
9:AI:12:ARG:O	9:AI:13:LYS:C	2.58	0.47
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.14	0.47
12:AL:90:LEU:HB3	12:AL:93:VAL:CG2	2.45	0.47
13:AM:85:CYS:O	13:AM:89:LEU:HG	2.14	0.47
17:AQ:12:VAL:CG1	17:AQ:55:ILE:HA	2.45	0.47
17:AQ:55:ILE:HD13	17:AQ:56:GLY:N	2.29	0.47
21:AU:40:LYS:HB3	21:AU:41:PRO:HD3	1.96	0.47
22:BA:75:G:H4'	46:BY:48:ARG:NH2	2.30	0.47
22:BA:141:G:H5"	22:BA:142:A:C6	2.49	0.47
22:BA:211:C:O2'	22:BA:212:G:H5'	2.15	0.47
22:BA:225:C:H2'	22:BA:226:A:O4'	2.15	0.47
22:BA:729:G:H4'	22:BA:763:G:C5'	2.44	0.47
22:BA:999:U:H5	22:BA:1154:G:N7	2.13	0.47
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.47	0.47
22:BA:1503:A:C6	22:BA:1504:A:C5	3.02	0.47
22:BA:2357:G:C2	22:BA:2361:G:C5	3.03	0.47
24:BC:245:VAL:CB	24:BC:250:VAL:O	2.63	0.47
27:BF:75:ALA:O	27:BF:76:GLY:C	2.56	0.47
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.14	0.47
1:CA:71:A:N1	1:CA:72:A:N7	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:126:G:C2'	1:CA:127:G:O5'	2.63	0.47
1:CA:137:U:H1'	1:CA:227:G:N2	2.28	0.47
1:CA:273:U:C2'	1:CA:274:A:H5'	2.44	0.47
1:CA:755:G:C2	1:CA:756:C:C6	3.03	0.47
1:CA:766:A:H2'	1:CA:767:A:O4'	2.15	0.47
1:CA:866:C:C4	1:CA:867:G:H1'	2.50	0.47
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.79	0.47
2:CB:199:VAL:C	2:CB:200:ILE:HD12	2.40	0.47
4:CD:203:LEU:HD12	4:CD:203:LEU:O	2.15	0.47
10:CJ:25:ILE:HD11	10:CJ:87:LEU:CD2	2.45	0.47
14:CN:68:GLY:O	14:CN:69:ARG:C	2.57	0.47
20:CT:24:ARG:HB2	20:CT:66:LEU:HD21	1.97	0.47
22:DA:185:G:C6	22:DA:212:G:N2	2.82	0.47
22:DA:197:A:N6	22:DA:2430:A:H2'	2.30	0.47
22:DA:593:U:N3	22:DA:594:U:C4	2.83	0.47
22:DA:630:G:C3'	22:DA:631:A:H5"	2.45	0.47
22:DA:1090:A:N1	22:DA:1091:G:C5	2.82	0.47
22:DA:1285:A:N6	22:DA:1329:U:C5	2.83	0.47
22:DA:1809:A:C6	22:DA:1810:A:C5	3.03	0.47
22:DA:2346:A:H3'	22:DA:2347:C:H5"	1.96	0.47
22:DA:2521:C:C2	22:DA:2545:G:N2	2.83	0.47
22:DA:2835:A:C2	22:DA:2879:A:N7	2.83	0.47
24:DC:267:ILE:O	24:DC:267:ILE:CG2	2.62	0.47
26:DE:48:THR:HG22	26:DE:86:ALA:HB3	1.96	0.47
26:DE:149:ILE:CG2	26:DE:188:MET:HG2	2.45	0.47
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.95	0.47
33:DL:94:THR:O	33:DL:98:ALA:N	2.45	0.47
36:DO:39:VAL:HG23	36:DO:78:VAL:CG1	2.44	0.47
38:DQ:76:TYR:OH	38:DQ:92:ARG:NH1	2.47	0.47
41:DT:69:ARG:HB2	41:DT:74:ILE:CG2	2.45	0.47
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.15	0.47
1:AA:22:G:C6	1:AA:23:C:C4	3.02	0.47
1:AA:73:C:O2'	1:AA:74:A:H5"	2.15	0.47
1:AA:504:C:H1'	1:AA:510:A:C4	2.50	0.47
4:AD:4:TYR:CE2	4:AD:6:GLY:O	2.67	0.47
4:AD:23:SER:HB2	4:AD:110:THR:HB	1.96	0.47
16:AP:67:ILE:HG23	16:AP:71:VAL:CG1	2.45	0.47
22:BA:38:A:N3	26:BE:43:THR:HB	2.30	0.47
22:BA:610:C:O2'	22:BA:611:C:H5'	2.14	0.47
25:BD:65:ALA:O	25:BD:66:GLY:C	2.57	0.47
25:BD:177:VAL:O	25:BD:177:VAL:CG2	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:123:ASP:CG	27:BF:127:ASN:HB2	2.40	0.47
30:BI:118:THR:O	30:BI:125:MET:HB3	2.15	0.47
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.97	0.47
1:CA:143:A:H5'	1:CA:144:G:C5'	2.45	0.47
1:CA:632:U:O2	1:CA:632:U:C2'	2.63	0.47
1:CA:1074:G:O2'	2:CB:102:THR:CG2	2.63	0.47
1:CA:1144:G:N2	1:CA:1145:A:C2	2.83	0.47
1:CA:1186:G:H4'	9:CI:112:GLU:CD	2.40	0.47
4:CD:148:LYS:CD	4:CD:148:LYS:H	2.28	0.47
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.14	0.47
8:CH:126:ILE:N	8:CH:126:ILE:CD1	2.78	0.47
19:CS:73:GLU:HB2	19:CS:74:PHE:CD2	2.50	0.47
20:CT:25:ARG:O	20:CT:26:SER:C	2.57	0.47
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.30	0.47
22:DA:160:A:C6	22:DA:161:A:C6	3.02	0.47
22:DA:210:C:OP1	50:D2:29:GLN:NE2	2.48	0.47
22:DA:699:A:C2'	22:DA:700:G:H5'	2.45	0.47
22:DA:906:U:C2'	22:DA:907:G:O5'	2.63	0.47
22:DA:1239:G:C6	22:DA:1240:U:C4	3.02	0.47
22:DA:1308:A:N6	22:DA:1309:G:C2	2.83	0.47
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.15	0.47
22:DA:1805:A:N3	22:DA:1813:G:N2	2.62	0.47
22:DA:2599:G:C8	24:DC:236:GLU:HB2	2.50	0.47
22:DA:2808:G:N2	22:DA:2891:U:C6	2.83	0.47
22:DA:2846:G:OP1	37:DP:53:ARG:NH1	2.48	0.47
23:DB:76:G:H2'	23:DB:77:U:O4'	2.15	0.47
24:DC:65:VAL:HG12	24:DC:67:PHE:CD1	2.50	0.47
27:DF:117:LEU:CD2	27:DF:176:PRO:HG2	2.45	0.47
31:DJ:58:ASN:OD1	31:DJ:127:GLY:O	2.33	0.47
32:DK:31:ARG:HB3	32:DK:32:TYR:CD1	2.49	0.47
34:DM:68:PHE:O	34:DM:69:PRO:O	2.32	0.47
38:DQ:47:TYR:CD1	38:DQ:47:TYR:C	2.93	0.47
38:DQ:61:TRP:HB3	38:DQ:92:ARG:O	2.14	0.47
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.29	0.47
1:AA:188:C:O2	1:AA:188:C:C2'	2.63	0.47
1:AA:202:G:O2'	1:AA:468:A:H2'	2.15	0.47
1:AA:370:C:O2'	1:AA:371:A:H5'	2.15	0.47
1:AA:474:G:C5	1:AA:475:C:C5	3.03	0.47
1:AA:1304:G:C2	1:AA:1305:G:N2	2.83	0.47
1:AA:1308:U:O2'	1:AA:1309:G:H5'	2.15	0.47
1:AA:1449:C:C2'	1:AA:1450:U:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1516:G:N2	1:AA:1519:A:OP2	2.46	0.47
11:AK:17:SER:HA	11:AK:79:ILE:HA	1.96	0.47
11:AK:35:THR:OG1	11:AK:41:ALA:N	2.48	0.47
22:BA:84:A:H62	22:BA:101:A:H2	1.62	0.47
22:BA:1027:A:C6	22:BA:1126:A:N3	2.83	0.47
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.96	0.47
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.14	0.47
22:BA:2182:U:H2'	22:BA:2183:A:C8	2.50	0.47
22:BA:2821:A:OP2	25:BD:115:GLY:N	2.47	0.47
26:BE:17:THR:O	26:BE:106:LYS:HE3	2.15	0.47
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.30	0.47
37:BP:27:GLU:O	37:BP:27:GLU:HG3	2.15	0.47
39:BR:49:ILE:O	39:BR:51:VAL:O	2.33	0.47
49:B1:4:GLY:C	49:B1:6:ARG:H	2.22	0.47
49:B1:6:ARG:HG2	49:B1:24:THR:HB	1.95	0.47
1:CA:15:G:OP1	1:CA:1396:A:O2'	2.26	0.47
1:CA:39:G:H2'	1:CA:40:C:H6	1.80	0.47
1:CA:264:C:O2'	17:CQ:66:PRO:O	2.33	0.47
1:CA:570:G:C5	1:CA:873:A:C6	3.03	0.47
1:CA:1163:A:C2	1:CA:1174:G:C2	3.03	0.47
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.62	0.47
3:CC:16:LYS:HG3	3:CC:17:PRO:HD2	1.97	0.47
3:CC:29:PHE:O	3:CC:33:LEU:HB2	2.14	0.47
3:CC:130:PHE:CE2	3:CC:157:LEU:HB3	2.49	0.47
4:CD:107:PHE:CG	4:CD:145:ILE:HD11	2.49	0.47
9:CI:28:ILE:CG2	9:CI:35:LEU:HB2	2.45	0.47
11:CK:36:ASP:OD2	11:CK:40:ASN:HB2	2.15	0.47
11:CK:89:PRO:HD3	21:CU:29:LEU:HD11	1.96	0.47
15:CO:37:ASN:O	15:CO:40:GLN:HB2	2.15	0.47
18:CR:58:ALA:O	18:CR:59:ILE:C	2.58	0.47
20:CT:6:SER:O	20:CT:8:LYS:N	2.48	0.47
20:CT:83:ILE:HD12	20:CT:84:ASN:N	2.30	0.47
22:DA:158:U:O2	22:DA:169:G:N1	2.47	0.47
22:DA:301:G:N2	22:DA:302:C:O2	2.47	0.47
22:DA:410:G:H2'	22:DA:2407:A:C8	2.49	0.47
22:DA:727:A:H2'	22:DA:728:G:C8	2.50	0.47
22:DA:845:A:H5'	22:DA:846:U:OP2	2.15	0.47
22:DA:1097:U:O2	30:DI:9:VAL:HG11	2.15	0.47
22:DA:1285:A:C6	22:DA:1329:U:C5	3.03	0.47
22:DA:1529:G:O6	22:DA:1543:G:C2	2.68	0.47
22:DA:1627:G:C2	22:DA:1628:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1636:U:H2'	22:DA:1637:A:C8	2.50	0.47
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.68	0.47
22:DA:1866:A:N7	22:DA:1867:G:C8	2.83	0.47
22:DA:2209:G:C2	22:DA:2216:G:N3	2.82	0.47
22:DA:2356:U:O3'	44:DW:20:ARG:HD3	2.15	0.47
22:DA:2516:A:N6	22:DA:2517:C:N4	2.62	0.47
23:DB:23:G:C2	23:DB:24:G:O6	2.68	0.47
23:DB:66:A:N6	23:DB:107:G:H2'	2.31	0.47
24:DC:124:ILE:CD1	24:DC:136:PRO:HD3	2.45	0.47
30:DI:127:ARG:HA	30:DI:130:GLU:HB2	1.95	0.47
31:DJ:36:LEU:HG	31:DJ:54:ILE:CD1	2.45	0.47
32:DK:104:THR:HA	32:DK:122:VAL:HB	1.97	0.47
32:DK:118:LEU:O	32:DK:119:ALA:CB	2.60	0.47
33:DL:74:THR:HG22	33:DL:107:PHE:HB2	1.96	0.47
33:DL:136:GLU:HA	33:DL:140:GLY:HA3	1.96	0.47
43:DV:63:ILE:HG13	43:DV:72:VAL:CG2	2.45	0.47
1:AA:151:A:H2'	1:AA:152:A:O4'	2.15	0.46
1:AA:168:G:C6	1:AA:169:C:N3	2.83	0.46
1:AA:1307:U:C2	1:AA:1308:U:C6	3.03	0.46
2:AB:148:LEU:HA	2:AB:151:ILE:HG22	1.96	0.46
2:AB:148:LEU:C	2:AB:151:ILE:HG22	2.40	0.46
3:AC:22:TRP:CD1	3:AC:59:ARG:CD	2.98	0.46
5:AE:151:GLU:C	5:AE:153:VAL:N	2.73	0.46
7:AG:145:ALA:C	7:AG:147:ALA:H	2.23	0.46
11:AK:88:GLY:H	11:AK:114:THR:HG22	1.80	0.46
12:AL:72:HIS:ND1	12:AL:72:HIS:C	2.73	0.46
22:BA:215:G:H4'	22:BA:216:A:OP1	2.14	0.46
22:BA:337:C:H2'	22:BA:338:G:O4'	2.15	0.46
22:BA:634:C:H2'	22:BA:635:C:C6	2.50	0.46
22:BA:747:U:C4	22:BA:2613:U:C5	3.03	0.46
22:BA:790:U:O2'	22:BA:791:C:P	2.73	0.46
22:BA:832:U:H2'	22:BA:833:A:H8	1.79	0.46
22:BA:1082:U:H5"	30:BI:119:GLY:HA2	1.97	0.46
22:BA:1098:A:N7	22:BA:1099:G:O6	2.48	0.46
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.96	0.46
22:BA:1923:U:N3	22:BA:1924:C:C6	2.82	0.46
22:BA:2660:A:H2'	22:BA:2661:G:O4'	2.15	0.46
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.51	0.46
27:BF:27:GLN:O	27:BF:28:VAL:C	2.57	0.46
30:BI:57:VAL:CG2	30:BI:58:VAL:N	2.78	0.46
35:BN:106:ASP:O	35:BN:107:ASN:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.28	0.46
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.64	0.46
1:CA:110:C:H2'	1:CA:111:G:O4'	2.16	0.46
1:CA:312:C:H2'	1:CA:313:A:O4'	2.15	0.46
1:CA:375:U:N3	1:CA:376:G:N7	2.63	0.46
1:CA:451:A:H4'	1:CA:452:A:O5'	2.15	0.46
1:CA:951:G:C5	1:CA:952:U:C5	3.03	0.46
1:CA:1072:G:C5	1:CA:1073:U:C5	3.03	0.46
1:CA:1181:G:O2'	1:CA:1182:G:C5	2.68	0.46
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.49	0.46
6:CF:15:SER:HB2	6:CF:44:ARG:NH1	2.30	0.46
10:CJ:34:ALA:O	10:CJ:78:GLU:HB3	2.15	0.46
18:CR:38:LYS:HD2	21:CU:24:GLU:OE1	2.14	0.46
21:CU:14:VAL:HG12	21:CU:16:LEU:HD23	1.98	0.46
21:CU:14:VAL:C	21:CU:16:LEU:HG	2.39	0.46
21:CU:51:SER:O	21:CU:53:VAL:N	2.48	0.46
22:DA:288:U:H2'	22:DA:289:G:C8	2.50	0.46
22:DA:453:A:N3	22:DA:457:A:O2'	2.48	0.46
22:DA:821:A:H4'	57:DA:3341:HOH:O	2.14	0.46
22:DA:976:G:O6	22:DA:988:A:C2	2.67	0.46
22:DA:1998:A:O3'	22:DA:2724:U:H4'	2.15	0.46
22:DA:2199:A:C4'	29:DH:28:ASN:CG	2.88	0.46
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.97	0.46
35:DN:87:PHE:CD1	35:DN:90:ARG:HD2	2.50	0.46
37:DP:92:VAL:C	37:DP:93:ARG:O	2.58	0.46
41:DT:69:ARG:NH1	41:DT:69:ARG:HB3	2.30	0.46
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.30	0.46
46:DY:18:LEU:O	46:DY:22:LEU:HB2	2.15	0.46
1:AA:203:G:C2	1:AA:215:C:C2	3.03	0.46
1:AA:237:G:OP1	17:AQ:42:THR:OG1	2.33	0.46
1:AA:559:A:H2'	1:AA:559:A:N3	2.30	0.46
1:AA:872:A:C2	1:AA:874:G:C6	3.03	0.46
1:AA:1387:G:C6	1:AA:1388:C:N4	2.83	0.46
5:AE:105:ILE:HG23	5:AE:105:ILE:O	2.15	0.46
8:AH:59:LEU:HD11	8:AH:61:LEU:HD21	1.98	0.46
10:AJ:91:ASP:OD2	10:AJ:91:ASP:N	2.47	0.46
17:AQ:67:LEU:O	17:AQ:68:SER:HB3	2.15	0.46
21:AU:11:PRO:C	21:AU:12:PHE:CD1	2.94	0.46
21:AU:29:LEU:HD23	21:AU:29:LEU:O	2.15	0.46
22:BA:191:A:HO2'	22:BA:678:C:HO2'	1.59	0.46
22:BA:1228:G:H2'	22:BA:1229:C:C6	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1342:A:OP1	41:BT:40:LYS:NZ	2.47	0.46
22:BA:1923:U:N3	22:BA:1924:C:C5	2.83	0.46
22:BA:2729:G:O2'	25:BD:191:GLY:HA3	2.15	0.46
24:BC:8:PRO:HB3	24:BC:14:ARG:HB2	1.97	0.46
27:BF:41:GLY:HA2	27:BF:85:ILE:HG13	1.97	0.46
33:BL:97:ALA:C	33:BL:99:ASN:N	2.73	0.46
33:BL:129:LYS:O	33:BL:130:GLY:C	2.58	0.46
42:BU:74:ASN:O	42:BU:75:ALA:C	2.56	0.46
1:CA:73:C:O2'	1:CA:74:A:P	2.73	0.46
1:CA:115:G:H4'	1:CA:116:A:O5'	2.15	0.46
1:CA:793:U:O2'	1:CA:1516:G:H1'	2.15	0.46
1:CA:851:G:C2	1:CA:852:G:C8	3.03	0.46
1:CA:1255:G:C6	1:CA:1279:G:N7	2.83	0.46
2:CB:27:MET:HA	2:CB:27:MET:HE3	1.96	0.46
2:CB:173:ILE:O	2:CB:177:ASN:ND2	2.49	0.46
3:CC:20:SER:HB2	14:CN:92:GLU:O	2.14	0.46
4:CD:95:GLU:OE2	4:CD:100:ASN:ND2	2.47	0.46
10:CJ:35:GLN:HB2	10:CJ:78:GLU:HB2	1.98	0.46
15:CO:89:ARG:NH1	22:DA:716:A:OP1	2.43	0.46
22:DA:291:G:N2	22:DA:350:G:C8	2.83	0.46
22:DA:883:G:N2	22:DA:894:U:O2	2.49	0.46
22:DA:1439:A:C8	22:DA:1440:U:C5	3.03	0.46
22:DA:1500:G:N1	22:DA:1501:G:C5	2.84	0.46
22:DA:1581:G:C5	22:DA:1582:C:N4	2.83	0.46
22:DA:1843:C:H4'	24:DC:251:GLN:OE1	2.15	0.46
22:DA:2127:G:C2	22:DA:2162:G:C8	3.03	0.46
22:DA:2367:G:O2'	22:DA:2368:C:H5'	2.15	0.46
22:DA:2377:A:O2'	22:DA:2378:A:H5'	2.15	0.46
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.45	0.46
24:DC:231:PRO:O	24:DC:242:LYS:HD2	2.15	0.46
28:DG:107:LEU:O	28:DG:152:ARG:NH2	2.48	0.46
1:AA:196:A:OP1	20:AT:64:LYS:HE2	2.15	0.46
1:AA:376:G:H5"	16:AP:5:ARG:HB2	1.96	0.46
1:AA:524:G:C6	1:AA:525:C:N4	2.83	0.46
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.45	0.46
1:AA:1407:C:HO2'	22:BA:1912:A:N6	2.13	0.46
1:AA:1408:A:H5'	22:BA:1912:A:N6	2.30	0.46
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.64	0.46
2:AB:167:ASP:O	2:AB:170:HIS:N	2.49	0.46
4:AD:23:SER:O	4:AD:24:GLY:C	2.58	0.46
4:AD:91:LEU:HD21	4:AD:195:ILE:CD1	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:122:ALA:HA	4:AD:146:ARG:HG3	1.97	0.46
9:AI:80:ARG:NH1	9:AI:103:PHE:CD1	2.83	0.46
11:AK:25:ALA:O	11:AK:89:PRO:O	2.33	0.46
13:AM:10:PRO:O	13:AM:11:ASP:CB	2.63	0.46
13:AM:75:MET:HE2	27:BF:112:ARG:HD3	1.97	0.46
16:AP:4:ILE:HG13	16:AP:21:VAL:HG22	1.97	0.46
16:AP:61:VAL:HG22	16:AP:67:ILE:CD1	2.46	0.46
22:BA:150:U:H2'	22:BA:151:C:C6	2.51	0.46
22:BA:526:A:O2'	22:BA:2043:C:O2	2.32	0.46
22:BA:858:G:H3'	22:BA:859:G:C8	2.50	0.46
22:BA:1073:A:H2'	22:BA:1074:G:H5"	1.96	0.46
22:BA:2359:C:O2'	51:B3:54:ASP:OD2	2.29	0.46
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.45	0.46
55:BA:3001:VIR:H213	55:BA:3001:VIR:H17	1.69	0.46
23:BB:41:G:H5"	27:BF:66:LEU:HD13	1.97	0.46
29:BH:132:PHE:CD2	29:BH:142:VAL:CG2	2.99	0.46
30:BI:18:ALA:HB2	30:BI:42:PHE:CE2	2.50	0.46
30:BI:103:ARG:HB3	30:BI:142:ASP:HA	1.98	0.46
32:BK:107:LEU:C	32:BK:109:SER:N	2.72	0.46
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.45	0.46
46:BY:22:LEU:O	46:BY:23:ARG:O	2.34	0.46
1:CA:64:G:N2	1:CA:67:C:N3	2.63	0.46
1:CA:841:C:H2'	1:CA:843:U:O4'	2.16	0.46
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.16	0.46
1:CA:1296:C:C5'	1:CA:1302:C:N4	2.78	0.46
2:CB:15:HIS:O	2:CB:16:PHE:C	2.57	0.46
7:CG:103:TRP:CD2	7:CG:137:LYS:HG2	2.50	0.46
8:CH:49:PHE:C	8:CH:49:PHE:CD1	2.92	0.46
9:CI:84:THR:HB	9:CI:98:LEU:HD21	1.96	0.46
22:DA:49:A:N6	22:DA:177:G:C5	2.83	0.46
22:DA:454:A:H3'	22:DA:455:C:H5'	1.96	0.46
22:DA:690:G:O2'	22:DA:780:G:OP1	2.26	0.46
22:DA:740:C:C4	22:DA:758:C:O2	2.69	0.46
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.16	0.46
22:DA:1623:G:C6	22:DA:1624:U:C4	3.04	0.46
22:DA:1975:G:C6	22:DA:1976:U:C4	3.04	0.46
22:DA:2798:U:H4'	22:DA:2799:A:H5'	1.97	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.46
35:DN:29:VAL:HG13	35:DN:83:LEU:CD1	2.45	0.46
37:DP:51:ARG:HB3	37:DP:58:ALA:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:57:GLY:O	42:DU:59:VAL:N	2.48	0.46
1:AA:364:A:C2	1:AA:365:U:O4	2.68	0.46
1:AA:370:C:C2	1:AA:371:A:C8	3.02	0.46
1:AA:457:G:H5'	1:AA:458:U:OP2	2.15	0.46
1:AA:500:G:H2'	1:AA:501:C:C6	2.51	0.46
1:AA:773:G:H2'	1:AA:774:G:O4'	2.14	0.46
1:AA:1251:A:C5	1:AA:1252:A:N7	2.84	0.46
1:AA:1370:G:C5'	9:AI:111:VAL:HG21	2.45	0.46
2:AB:27:MET:HE3	2:AB:193:PRO:HG3	1.97	0.46
2:AB:47:VAL:C	2:AB:49:MET:N	2.73	0.46
2:AB:163:VAL:HG22	2:AB:185:ALA:HB1	1.96	0.46
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.15	0.46
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.14	0.46
15:AO:56:LEU:HD12	15:AO:56:LEU:O	2.14	0.46
19:AS:51:VAL:CG2	19:AS:71:LEU:HD13	2.45	0.46
20:AT:67:ILE:HD11	20:AT:71:LYS:HE3	1.97	0.46
22:BA:71:A:H5'	22:BA:73:A:C8	2.51	0.46
22:BA:567:U:H2'	22:BA:568:U:O5'	2.16	0.46
22:BA:909:A:C2	22:BA:912:C:H1'	2.51	0.46
22:BA:998:C:P	38:BQ:92:ARG:NH2	2.89	0.46
22:BA:1206:G:C5	22:BA:1207:C:C5	3.03	0.46
22:BA:1384:A:H5"	22:BA:1385:A:OP2	2.15	0.46
22:BA:1916:A:C6	22:BA:1917:U:C6	3.02	0.46
22:BA:2489:U:O2	22:BA:2491:U:C4	2.68	0.46
22:BA:2655:G:O2'	22:BA:2664:G:O6	2.29	0.46
22:BA:2886:A:C2	22:BA:2887:A:H1'	2.50	0.46
26:BE:65:THR:O	26:BE:67:ARG:N	2.48	0.46
27:BF:52:ASN:CG	27:BF:147:ASP:OD2	2.57	0.46
28:BG:62:TRP:O	28:BG:63:ALA:C	2.56	0.46
29:BH:80:ILE:HG21	29:BH:94:ILE:CG1	2.45	0.46
1:CA:144:G:C5	1:CA:179:A:C2	3.03	0.46
1:CA:155:A:C2	1:CA:167:A:C6	3.03	0.46
1:CA:160:A:C2	1:CA:343:U:H1'	2.50	0.46
1:CA:161:A:H2'	1:CA:162:A:O4'	2.16	0.46
1:CA:269:C:H2'	1:CA:270:A:C8	2.51	0.46
1:CA:464:U:C2	1:CA:466:A:OP2	2.68	0.46
1:CA:716:A:C2'	1:CA:717:U:O5'	2.64	0.46
1:CA:862:C:C2	1:CA:863:U:C5	3.04	0.46
1:CA:920:U:C2	1:CA:921:U:C5	3.04	0.46
1:CA:927:G:O2'	1:CA:1503:A:N7	2.39	0.46
1:CA:949:A:C2	1:CA:1233:G:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1499:A:H3'	57:CA:1883:HOH:O	2.16	0.46
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	1.98	0.46
4:CD:188:ARG:O	4:CD:191:LEU:HD12	2.15	0.46
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.16	0.46
5:CE:154:ALA:C	5:CE:156:LYS:N	2.72	0.46
6:CF:99:ALA:O	6:CF:100:SER:CB	2.63	0.46
7:CG:8:GLY:O	7:CG:9:GLN:HB3	2.16	0.46
7:CG:146:GLU:HA	7:CG:149:LYS:HE2	1.98	0.46
13:CM:39:ILE:HG13	13:CM:56:LEU:HD21	1.96	0.46
20:CT:54:MET:HE1	20:CT:58:VAL:HG21	1.96	0.46
22:DA:21:A:N1	22:DA:520:G:C5	2.84	0.46
22:DA:571:U:N3	22:DA:575:A:N7	2.64	0.46
22:DA:962:G:C2'	22:DA:963:U:H5'	2.46	0.46
22:DA:1055:G:O2'	22:DA:1085:A:N1	2.43	0.46
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.97	0.46
22:DA:1676:A:N7	57:DA:3763:HOH:O	2.36	0.46
22:DA:1806:C:C4	22:DA:1807:G:N7	2.83	0.46
22:DA:2221:G:C5	22:DA:2222:C:C5	3.04	0.46
24:DC:141:VAL:CG1	24:DC:142:HIS:N	2.78	0.46
24:DC:145:GLU:OE2	24:DC:149:GLY:N	2.46	0.46
26:DE:83:VAL:CG1	26:DE:86:ALA:HA	2.46	0.46
27:DF:108:VAL:N	27:DF:109:PRO:HD2	2.31	0.46
28:DG:24:ILE:HD11	28:DG:43:VAL:HG11	1.98	0.46
28:DG:35:ARG:NE	28:DG:71:LEU:HD22	2.31	0.46
36:DO:49:VAL:HG12	36:DO:50:ALA:N	2.31	0.46
39:DR:101:ILE:O	39:DR:101:ILE:HG22	2.15	0.46
40:DS:32:ALA:O	40:DS:35:ILE:N	2.48	0.46
43:DV:9:ARG:NH2	43:DV:17:SER:OG	2.48	0.46
45:DX:40:VAL:HG22	45:DX:45:ARG:O	2.16	0.46
49:D1:5:ILE:CG2	49:D1:28:ARG:HD3	2.45	0.46
1:AA:204:G:N3	1:AA:465:A:C2	2.83	0.46
1:AA:257:G:C2	1:AA:258:G:C8	3.03	0.46
1:AA:270:A:C5	1:AA:271:C:C4	3.04	0.46
1:AA:397:A:C6	1:AA:548:G:N7	2.84	0.46
1:AA:478:A:H2'	1:AA:479:U:O4'	2.16	0.46
1:AA:545:C:H2'	1:AA:546:A:H5'	1.98	0.46
1:AA:866:C:C4	1:AA:867:G:H1'	2.49	0.46
1:AA:927:G:N1	1:AA:1391:U:C2	2.84	0.46
1:AA:1066:C:H2'	1:AA:1066:C:O2	2.15	0.46
1:AA:1080:A:OP1	5:AE:52:LYS:HE3	2.16	0.46
2:AB:50:PHE:HA	2:AB:53:ALA:HB3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.15	0.46
2:AB:211:THR:O	2:AB:215:GLY:N	2.44	0.46
5:AE:151:GLU:C	5:AE:153:VAL:H	2.23	0.46
6:AF:55:HIS:O	6:AF:56:LYS:O	2.33	0.46
7:AG:15:ASP:OD1	7:AG:15:ASP:C	2.58	0.46
8:AH:14:ILE:O	8:AH:16:ASN:N	2.48	0.46
8:AH:75:ILE:HD12	8:AH:128:TYR:O	2.16	0.46
9:AI:80:ARG:HD2	9:AI:80:ARG:C	2.41	0.46
13:AM:12:HIS:HA	13:AM:44:LYS:HE3	1.97	0.46
16:AP:67:ILE:CG2	16:AP:68:SER:N	2.78	0.46
21:AU:44:GLU:OE2	21:AU:45:ARG:NH1	2.49	0.46
22:BA:687:C:H2'	22:BA:688:U:O4'	2.16	0.46
22:BA:736:C:N3	22:BA:737:C:C5	2.83	0.46
22:BA:1469:A:C2	22:BA:1470:A:C4	3.03	0.46
22:BA:1575:C:H2'	22:BA:1576:U:O4'	2.15	0.46
22:BA:1770:G:C5	22:BA:1983:G:C6	3.04	0.46
22:BA:1795:C:C4	22:BA:1796:U:C4	3.03	0.46
22:BA:1866:A:C2	22:BA:1876:A:C5	3.03	0.46
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.97	0.46
22:BA:2394:C:OP2	51:B3:30:ARG:HD3	2.15	0.46
22:BA:2519:U:OP1	22:BA:2519:U:H3'	2.16	0.46
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.80	0.46
22:BA:2897:U:H2'	22:BA:2898:U:H6	1.81	0.46
23:BB:109:A:C5	23:BB:110:C:C4	3.04	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
37:BP:31:TRP:CZ2	37:BP:40:LEU:CD1	2.99	0.46
39:BR:2:TYR:HA	39:BR:14:VAL:O	2.16	0.46
40:BS:55:ILE:HG23	40:BS:66:ILE:HG12	1.97	0.46
45:BX:33:LEU:O	45:BX:34:HIS:CG	2.68	0.46
53:B5:212:SER:HA	53:B5:221:PRO:CB	2.46	0.46
1:CA:301:G:H2'	1:CA:302:G:C8	2.51	0.46
1:CA:1460:C:N4	1:CA:1461:G:C6	2.84	0.46
1:CA:1533:C:H4'	1:CA:1534:A:OP1	2.16	0.46
2:CB:181:ILE:HD13	2:CB:181:ILE:N	2.29	0.46
4:CD:192:SER:HB2	4:CD:195:ILE:CG1	2.46	0.46
16:CP:42:ILE:O	16:CP:43:ALA:HB3	2.16	0.46
20:CT:51:PHE:CD2	20:CT:51:PHE:C	2.93	0.46
22:DA:219:A:N7	22:DA:220:G:N7	2.64	0.46
22:DA:297:G:H2'	22:DA:298:G:O4'	2.16	0.46
22:DA:950:G:H2'	22:DA:951:C:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1027:A:N6	22:DA:1126:A:N3	2.63	0.46
22:DA:1388:G:N2	22:DA:1389:G:H1'	2.31	0.46
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.15	0.46
22:DA:1923:U:H2'	22:DA:1924:C:C6	2.50	0.46
23:DB:27:C:OP1	36:DO:34:HIS:NE2	2.47	0.46
24:DC:212:ARG:NE	24:DC:216:VAL:O	2.49	0.46
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.55	0.46
32:DK:70:ARG:HG2	32:DK:76:VAL:HG23	1.97	0.46
37:DP:21:ARG:HD2	37:DP:22:PRO:HD2	1.97	0.46
41:DT:39:THR:HG23	41:DT:42:GLU:H	1.80	0.46
42:DU:4:LYS:HG2	42:DU:85:PHE:CZ	2.51	0.46
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.50	0.46
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.64	0.46
1:AA:71:A:N3	1:AA:72:A:C8	2.83	0.46
1:AA:628:G:H2'	1:AA:629:A:O4'	2.16	0.46
1:AA:1370:G:H5"	9:AI:111:VAL:CG2	2.46	0.46
4:AD:6:GLY:O	4:AD:7:PRO:C	2.58	0.46
8:AH:2:SER:O	8:AH:3:MET:C	2.58	0.46
8:AH:10:MET:CE	8:AH:33:LYS:HA	2.46	0.46
9:AI:120:LYS:HG3	9:AI:123:ARG:CB	2.45	0.46
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.45	0.46
11:AK:38:GLN:O	11:AK:40:ASN:ND2	2.49	0.46
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.97	0.46
16:AP:77:GLU:C	16:AP:79:ASN:N	2.74	0.46
20:AT:82:GLN:O	20:AT:83:ILE:C	2.58	0.46
21:AU:11:PRO:O	21:AU:12:PHE:HB3	2.16	0.46
22:BA:528:A:C2	22:BA:2043:C:H4'	2.51	0.46
22:BA:581:C:H2'	22:BA:582:A:C8	2.50	0.46
22:BA:729:G:H4'	22:BA:763:G:H5'	1.97	0.46
22:BA:1078:U:H5"	22:BA:1079:C:OP1	2.15	0.46
22:BA:1090:A:C6	22:BA:1091:G:N7	2.84	0.46
22:BA:1570:A:N6	22:BA:1571:A:N6	2.64	0.46
22:BA:1846:G:H2'	22:BA:1847:A:C1'	2.46	0.46
22:BA:2025:C:OP2	57:BA:3475:HOH:O	2.20	0.46
22:BA:2031:A:C6	22:BA:2498:C:H1'	2.50	0.46
22:BA:2352:A:N3	22:BA:2366:A:C2	2.84	0.46
22:BA:2428:G:C5'	22:BA:2429:G:OP1	2.61	0.46
22:BA:2808:G:C2	22:BA:2891:U:C5	3.04	0.46
25:BD:1:MET:HG3	25:BD:205:PRO:HG2	1.96	0.46
27:BF:37:ASN:O	27:BF:153:ASP:HB2	2.16	0.46
27:BF:104:ILE:HG22	27:BF:176:PRO:HD2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.46
37:BP:62:ARG:HB2	37:BP:71:GLU:HG2	1.96	0.46
48:B0:30:VAL:CG1	48:B0:35:GLY:HA2	2.46	0.46
48:B0:52:ARG:HB2	48:B0:52:ARG:NH2	2.31	0.46
1:CA:96:U:HO2'	1:CA:97:G:P	2.38	0.46
1:CA:151:A:H2'	1:CA:152:A:O4'	2.16	0.46
1:CA:437:U:C2'	1:CA:438:U:H5'	2.44	0.46
1:CA:743:A:C2	1:CA:744:C:C6	3.04	0.46
1:CA:945:G:H2'	1:CA:945:G:N3	2.31	0.46
1:CA:1101:A:H4'	1:CA:1102:A:O5'	2.16	0.46
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.51	0.46
2:CB:119:THR:O	2:CB:120:GLN:HB2	2.15	0.46
11:CK:89:PRO:HD3	21:CU:29:LEU:HD13	1.97	0.46
11:CK:112:ASP:C	11:CK:112:ASP:OD1	2.58	0.46
12:CL:44:LYS:HB2	12:CL:45:PRO:CD	2.44	0.46
12:CL:75:GLN:O	12:CL:76:GLU:C	2.58	0.46
22:DA:70:G:H5"	22:DA:112:U:O2	2.14	0.46
22:DA:294:A:N6	22:DA:345:A:C4	2.84	0.46
22:DA:323:C:O2	22:DA:323:C:O4'	2.32	0.46
22:DA:347:A:C2	22:DA:348:A:C4	3.03	0.46
22:DA:483:A:H1'	42:DU:45:HIS:HB2	1.97	0.46
22:DA:770:G:H1'	22:DA:1379:U:C4	2.50	0.46
22:DA:776:G:C8	22:DA:793:A:C2	3.04	0.46
22:DA:1878:G:H2'	22:DA:1879:C:O4'	2.16	0.46
22:DA:2093:G:C2	22:DA:2094:A:C5	3.04	0.46
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.31	0.46
22:DA:2787:C:O4'	25:DD:63:PRO:HA	2.16	0.46
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.82	0.46
25:DD:30:GLU:O	25:DD:31:ALA:C	2.59	0.46
35:DN:44:LEU:O	35:DN:48:VAL:HG23	2.15	0.46
40:DS:14:ALA:HB1	40:DS:18:ARG:CZ	2.46	0.46
40:DS:47:VAL:HG23	40:DS:103:ILE:HG21	1.98	0.46
42:DU:9:ASP:C	42:DU:9:ASP:OD1	2.58	0.46
43:DV:48:MET:SD	43:DV:86:LEU:HG	2.56	0.46
46:DY:28:LEU:CD1	46:DY:46:VAL:HG21	2.46	0.46
1:AA:71:A:HO2'	1:AA:72:A:P	2.35	0.46
1:AA:103:U:C2	1:AA:104:G:C8	3.04	0.46
1:AA:531:U:H5"	3:AC:161:GLU:OE2	2.16	0.46
1:AA:960:U:H2'	1:AA:1225:A:H62	1.81	0.46
1:AA:1133:G:N2	1:AA:1142:G:C4	2.84	0.46
1:AA:1350:A:C5	1:AA:1351:U:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1406:U:C5	1:AA:1407:C:C4	3.04	0.46
1:AA:1410:A:C2	1:AA:1491:G:C2	3.04	0.46
3:AC:126:ARG:O	3:AC:127:ARG:CB	2.62	0.46
8:AH:78:VAL:HG11	8:AH:125:ILE:HD11	1.97	0.46
12:AL:44:LYS:HB2	12:AL:44:LYS:NZ	2.30	0.46
21:AU:14:VAL:HG12	21:AU:16:LEU:HD21	1.96	0.46
22:BA:1477:A:N6	22:BA:1514:G:O2'	2.46	0.46
22:BA:1688:U:C5'	22:BA:1689:A:OP1	2.64	0.46
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.49	0.46
22:BA:2120:G:N2	22:BA:2179:C:C2	2.84	0.46
22:BA:2485:G:OP1	34:BM:45:GLN:NE2	2.48	0.46
24:BC:28:LYS:HB3	24:BC:29:PRO:HD2	1.97	0.46
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.46	0.46
42:BU:36:VAL:O	42:BU:37:GLU:C	2.58	0.46
1:CA:50:A:H1'	1:CA:52:C:O4'	2.16	0.46
1:CA:131:A:O2'	1:CA:262:A:N3	2.40	0.46
1:CA:158:G:C6	1:CA:164:G:C6	3.03	0.46
1:CA:252:U:H5'	1:CA:253:A:OP2	2.16	0.46
1:CA:842:U:O2'	1:CA:846:G:C6	2.69	0.46
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.16	0.46
4:CD:26:ARG:HD2	4:CD:31:LYS:CE	2.46	0.46
4:CD:38:PRO:HD2	4:CD:42:GLY:CA	2.45	0.46
7:CG:42:ILE:HG21	7:CG:116:MET:CG	2.45	0.46
10:CJ:48:ARG:NH1	10:CJ:66:GLU:OE1	2.49	0.46
16:CP:4:ILE:HD12	16:CP:4:ILE:N	2.31	0.46
16:CP:52:LEU:HD21	16:CP:57:ILE:CD1	2.46	0.46
20:CT:81:ALA:O	20:CT:85:LYS:HG2	2.14	0.46
21:CU:32:VAL:O	21:CU:32:VAL:HG12	2.15	0.46
22:DA:21:A:N1	22:DA:520:G:C6	2.83	0.46
22:DA:64:A:H2'	22:DA:65:U:O4'	2.16	0.46
22:DA:668:A:N6	22:DA:670:A:HO2'	2.14	0.46
22:DA:1196:C:O4'	22:DA:1226:A:C6	2.69	0.46
22:DA:1262:A:C6	22:DA:1263:U:N3	2.83	0.46
22:DA:1278:C:O2'	35:DN:27:SER:HB3	2.16	0.46
22:DA:1581:G:C6	22:DA:1582:C:N4	2.83	0.46
22:DA:1682:G:N2	22:DA:1757:A:O4'	2.48	0.46
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.51	0.46
22:DA:1718:G:C6	22:DA:1743:G:N3	2.84	0.46
22:DA:1754:A:N6	22:DA:1755:A:N1	2.63	0.46
22:DA:1969:A:O2'	22:DA:1972:G:N3	2.40	0.46
22:DA:2131:U:H5'	22:DA:2132:U:H5"	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2264:C:O2	22:DA:2277:G:C2	2.69	0.46
24:DC:24:LEU:HD21	24:DC:90:ASN:ND2	2.30	0.46
25:DD:114:LYS:HE2	25:DD:196:ALA:HA	1.97	0.46
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.50	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
34:DM:38:ARG:HG3	34:DM:98:PRO:HD3	1.98	0.46
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.62	0.46
42:DU:34:VAL:HG13	42:DU:67:VAL:HG23	1.97	0.46
44:DW:19:LYS:O	44:DW:21:LEU:N	2.48	0.46
45:DX:7:VAL:HG12	45:DX:8:THR:N	2.29	0.46
46:DY:56:LEU:O	46:DY:57:LEU:HB3	2.16	0.46
1:AA:21:G:H2'	1:AA:22:G:C8	2.50	0.46
1:AA:109:A:C6	1:AA:326:G:C6	3.04	0.46
1:AA:219:U:H2'	1:AA:220:G:C8	2.50	0.46
1:AA:913:A:H4'	1:AA:914:A:OP1	2.14	0.46
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.15	0.46
1:AA:1024:G:C2'	1:AA:1025:U:O5'	2.64	0.46
1:AA:1130:A:H8	1:AA:1130:A:O5'	1.98	0.46
1:AA:1314:C:N4	19:AS:4:SER:HA	2.31	0.46
2:AB:21:ARG:NE	2:AB:21:ARG:CA	2.79	0.46
2:AB:32:PHE:O	2:AB:32:PHE:CG	2.68	0.46
3:AC:167:TRP:C	3:AC:167:TRP:CE3	2.94	0.46
5:AE:99:ALA:C	5:AE:101:GLU:N	2.71	0.46
13:AM:6:GLY:HA3	13:AM:66:GLU:HG3	1.98	0.46
14:AN:51:LEU:CB	14:AN:52:PRO:HD2	2.45	0.46
17:AQ:61:ILE:CG2	17:AQ:73:TRP:CE3	2.99	0.46
22:BA:181:A:H2'	22:BA:182:A:C8	2.51	0.46
22:BA:370:G:O2'	22:BA:423:A:H3'	2.16	0.46
22:BA:483:A:C8	22:BA:484:C:C5	3.03	0.46
22:BA:744:U:C4	22:BA:745:G:C5	3.03	0.46
22:BA:1009:A:P	31:BJ:39:LYS:HZ1	2.30	0.46
22:BA:1014:A:C2	22:BA:1149:G:C4	3.03	0.46
22:BA:1056:G:H5"	22:BA:1057:A:C4'	2.46	0.46
22:BA:1071:G:N7	22:BA:1089:A:N6	2.64	0.46
22:BA:1094:U:C4	22:BA:1097:U:OP2	2.68	0.46
22:BA:1686:C:H2'	22:BA:1687:G:O4'	2.15	0.46
22:BA:2350:C:H2'	22:BA:2351:G:O4'	2.16	0.46
22:BA:2801:G:H2'	22:BA:2802:G:C8	2.51	0.46
22:BA:2810:A:H2'	22:BA:2811:G:O4'	2.16	0.46
22:BA:2834:G:O6	22:BA:2879:A:H2'	2.15	0.46
24:BC:199:GLU:O	24:BC:200:HIS:C	2.58	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:80:LEU:HD13	30:BI:136:MET:SD	2.56	0.46
36:BO:12:THR:O	36:BO:12:THR:CG2	2.63	0.46
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.16	0.46
1:CA:8:A:N6	4:CD:54:GLN:OE1	2.49	0.46
1:CA:890:G:HO2'	1:CA:891:U:P	2.39	0.46
1:CA:1426:G:C4	1:CA:1475:G:C2	3.03	0.46
3:CC:22:TRP:CH2	3:CC:32:ASN:HB3	2.51	0.46
6:CF:25:TYR:O	6:CF:26:THR:C	2.59	0.46
8:CH:92:LEU:CD2	8:CH:113:ASP:HB2	2.46	0.46
9:CI:47:VAL:O	9:CI:80:ARG:HG2	2.15	0.46
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.80	0.46
22:DA:185:G:C5	22:DA:212:G:N2	2.84	0.46
22:DA:306:U:C5	22:DA:307:G:C5	3.04	0.46
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.25	0.46
22:DA:621:A:C5	22:DA:622:G:H1'	2.50	0.46
22:DA:658:U:O2'	26:DE:95:LYS:NZ	2.34	0.46
22:DA:782:A:O2'	24:DC:224:ALA:O	2.32	0.46
22:DA:859:G:O2'	22:DA:916:G:O6	2.19	0.46
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.38	0.46
22:DA:1288:G:C5	22:DA:1327:A:C2	3.04	0.46
22:DA:1376:C:C5'	57:DA:3395:HOH:O	2.62	0.46
22:DA:1722:A:C2	22:DA:1739:A:H1'	2.50	0.46
22:DA:1739:A:C5	22:DA:1740:G:C5	3.03	0.46
22:DA:1884:G:O2'	22:DA:1885:A:OP2	2.33	0.46
22:DA:2199:A:C5	22:DA:2225:A:N1	2.83	0.46
22:DA:2784:U:H4'	25:DD:42:ASN:O	2.15	0.46
24:DC:212:ARG:C	24:DC:214:ARG:H	2.23	0.46
26:DE:117:ARG:NH1	33:DL:2:ARG:HD2	2.30	0.46
28:DG:159:GLY:HA2	28:DG:169:VAL:HG11	1.98	0.46
36:DO:71:ALA:HB2	36:DO:102:ARG:HB2	1.98	0.46
1:AA:455:G:C2	1:AA:478:A:N1	2.84	0.46
1:AA:828:U:C5	1:AA:859:G:C4	3.04	0.46
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.16	0.46
1:AA:1135:U:C2	1:AA:1137:C:N3	2.84	0.46
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.51	0.46
2:AB:66:LYS:HG2	2:AB:156:GLY:O	2.16	0.46
5:AE:109:GLY:HA2	5:AE:112:ARG:HB3	1.97	0.46
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.63	0.46
9:AI:50:GLN:C	9:AI:52:LEU:H	2.23	0.46
13:AM:4:ILE:HD11	13:AM:10:PRO:HG2	1.98	0.46
17:AQ:26:GLU:OE1	17:AQ:39:LYS:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:44:MET:HE2	19:AS:49:ILE:HD13	1.98	0.46
22:BA:574:A:H4'	22:BA:575:A:O5'	2.16	0.46
22:BA:1098:A:N7	22:BA:1099:G:C6	2.83	0.46
22:BA:1176:U:H2'	22:BA:1177:G:C8	2.50	0.46
22:BA:1242:U:H2'	22:BA:1243:C:C6	2.51	0.46
22:BA:1495:A:N3	22:BA:1578:U:O2'	2.43	0.46
22:BA:1876:A:C2	22:BA:1877:A:N9	2.84	0.46
22:BA:1883:U:O4	22:BA:1884:G:N1	2.49	0.46
22:BA:1946:U:H2'	22:BA:1947:C:C6	2.51	0.46
22:BA:2001:C:C2	22:BA:2002:G:C8	3.04	0.46
22:BA:2176:A:C5	22:BA:2177:C:N4	2.84	0.46
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.50	0.46
22:BA:2547:A:C5'	32:BK:29:HIS:NE2	2.79	0.46
26:BE:121:VAL:O	26:BE:122:GLU:C	2.58	0.46
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.46
32:BK:6:THR:HG22	32:BK:7:MET:N	2.30	0.46
41:BT:61:LEU:HD12	41:BT:61:LEU:O	2.15	0.46
43:BV:46:LYS:O	43:BV:47:VAL:C	2.59	0.46
1:CA:34:C:H2'	1:CA:35:G:C8	2.51	0.46
1:CA:55:A:C8	1:CA:56:U:C5	3.04	0.46
1:CA:278:G:OP2	17:CQ:43:LYS:NZ	2.48	0.46
1:CA:499:A:C6	1:CA:547:A:C8	3.04	0.46
1:CA:844:G:H2'	1:CA:844:G:N3	2.31	0.46
1:CA:880:C:C2	1:CA:881:G:C8	3.04	0.46
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.51	0.46
2:CB:57:LEU:O	2:CB:60:ILE:CD1	2.64	0.46
2:CB:68:LEU:C	2:CB:68:LEU:CD2	2.89	0.46
2:CB:140:GLU:O	2:CB:141:LEU:C	2.59	0.46
2:CB:207:ILE:HG12	2:CB:208:ARG:N	2.30	0.46
4:CD:97:ARG:O	4:CD:98:LEU:C	2.57	0.46
15:CO:52:SER:O	15:CO:53:ARG:C	2.58	0.46
17:CQ:70:THR:HG22	17:CQ:71:LYS:H	1.81	0.46
19:CS:55:ARG:NH2	19:CS:79:THR:HG22	2.31	0.46
22:DA:486:C:H1'	22:DA:495:G:N2	2.31	0.46
22:DA:529:A:H4'	22:DA:530:G:OP1	2.16	0.46
22:DA:667:U:C4	22:DA:668:A:N7	2.84	0.46
22:DA:1096:A:H2'	22:DA:1097:U:H5"	1.97	0.46
22:DA:1195:G:O2'	22:DA:1226:A:N1	2.39	0.46
22:DA:1403:A:C2	22:DA:1404:C:C2	3.04	0.46
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.15	0.46
22:DA:1598:A:C2'	22:DA:1599:U:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1830:C:C4'	24:DC:15:HIS:HE1	2.29	0.46
22:DA:2094:A:C4	22:DA:2095:A:C8	3.04	0.46
22:DA:2355:G:C6	22:DA:2356:U:N3	2.84	0.46
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.51	0.46
22:DA:2811:G:OP1	25:DD:61:THR:HB	2.16	0.46
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	1.98	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
30:DI:17:MET:HB3	30:DI:20:PRO:HB3	1.97	0.46
35:DN:12:ARG:NE	35:DN:20:MET:CE	2.79	0.46
40:DS:79:GLY:N	40:DS:100:THR:O	2.47	0.46
47:DZ:6:LYS:HB2	47:DZ:58:GLU:HG3	1.96	0.46
1:AA:167:A:H2'	1:AA:168:G:O4'	2.15	0.46
1:AA:595:A:C6	1:AA:641:U:C6	3.04	0.46
1:AA:824:G:H1'	8:AH:2:SER:HA	1.98	0.46
1:AA:914:A:C5	1:AA:915:A:N7	2.84	0.46
1:AA:1202:U:C5	1:AA:1203:C:C5	3.04	0.46
1:AA:1377:A:C5	7:AG:7:ILE:HD11	2.51	0.46
2:AB:64:LYS:C	2:AB:64:LYS:HD3	2.41	0.46
2:AB:208:ARG:C	2:AB:210:VAL:N	2.74	0.46
6:AF:4:TYR:CD2	6:AF:71:ILE:HD13	2.51	0.46
6:AF:81:ASN:OD1	6:AF:83:ALA:HB3	2.16	0.46
7:AG:127:ALA:O	7:AG:130:ASN:N	2.49	0.46
9:AI:91:ASP:OD1	9:AI:91:ASP:C	2.59	0.46
11:AK:53:ARG:N	11:AK:56:ARG:HB2	2.31	0.46
14:AN:61:ARG:HA	57:AN:301:HOH:O	2.16	0.46
15:AO:70:LEU:HD21	15:AO:77:ARG:CB	2.46	0.46
16:AP:10:GLY:O	16:AP:11:ALA:CB	2.64	0.46
19:AS:40:ILE:HG12	19:AS:71:LEU:HD23	1.98	0.46
22:BA:287:G:H2'	22:BA:288:U:C6	2.51	0.46
23:BB:28:C:H2'	23:BB:29:A:O4'	2.16	0.46
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.46
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.46
33:BL:85:VAL:CG1	33:BL:94:THR:CG2	2.93	0.46
34:BM:72:PRO:HB3	34:BM:92:TRP:CZ3	2.51	0.46
38:BQ:98:ILE:HD13	39:BR:40:MET:HE1	1.98	0.46
38:BQ:112:LYS:HD3	39:BR:48:LYS:HD2	1.98	0.46
41:BT:2:ILE:HG23	41:BT:4:GLU:HA	1.98	0.46
46:BY:5:GLU:HA	46:BY:8:GLU:HG3	1.98	0.46
50:B2:23:ALA:C	50:B2:24:THR:HG23	2.41	0.46
1:CA:289:G:C2	1:CA:290:C:C5	3.04	0.46
1:CA:683:G:H2'	1:CA:684:U:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:711:G:N2	1:CA:712:A:C4	2.84	0.46
1:CA:741:G:OP2	15:CO:2:SER:OG	2.30	0.46
1:CA:774:G:C4	1:CA:775:G:C8	3.04	0.46
1:CA:1388:C:C2	1:CA:1389:C:C5	3.03	0.46
1:CA:1413:A:C2	1:CA:1488:G:C2	3.04	0.46
1:CA:1426:G:C5	1:CA:1475:G:C2	3.04	0.46
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.51	0.46
3:CC:19:ASN:OD1	3:CC:54:ARG:NE	2.49	0.46
3:CC:79:LYS:O	3:CC:81:GLY:N	2.49	0.46
4:CD:9:LEU:HD11	4:CD:29:ASP:OD2	2.16	0.46
6:CF:14:GLN:C	6:CF:16:GLU:H	2.24	0.46
12:CL:44:LYS:CB	12:CL:45:PRO:CD	2.93	0.46
14:CN:53:ARG:O	14:CN:59:ARG:HD2	2.17	0.46
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.97	0.46
22:DA:118:A:N7	22:DA:119:A:N7	2.64	0.46
22:DA:200:U:C4	22:DA:248:G:N2	2.83	0.46
22:DA:674:G:N2	22:DA:2445:G:OP1	2.49	0.46
22:DA:1428:C:C5	22:DA:1569:A:H5"	2.51	0.46
22:DA:1800:C:C2	22:DA:1802:A:C8	3.04	0.46
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.16	0.46
22:DA:2473:U:O4	28:DG:176:LYS:NZ	2.49	0.46
22:DA:2478:A:N7	22:DA:2529:G:C6	2.83	0.46
22:DA:2603:G:C6	22:DA:2604:U:C4	3.04	0.46
22:DA:2700:A:H2'	22:DA:2701:U:C6	2.51	0.46
26:DE:109:LEU:O	26:DE:112:LEU:N	2.49	0.46
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.31	0.46
32:DK:1:MET:HG2	32:DK:32:TYR:CD2	2.51	0.46
33:DL:77:ILE:HD11	33:DL:101:ILE:HG21	1.97	0.46
40:DS:29:VAL:HG21	40:DS:107:VAL:HG21	1.98	0.46
42:DU:36:VAL:O	42:DU:37:GLU:C	2.59	0.46
46:DY:31:GLN:O	46:DY:32:ALA:C	2.58	0.46
1:AA:192:A:C6	1:AA:193:C:C4	3.04	0.45
1:AA:575:G:C6	1:AA:821:G:C8	3.04	0.45
1:AA:844:G:N3	1:AA:845:A:N7	2.64	0.45
1:AA:908:A:C2	1:AA:909:A:C4	3.04	0.45
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.16	0.45
1:AA:1314:C:P	19:AS:6:LYS:HZ2	2.39	0.45
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.51	0.45
1:AA:1422:G:O2'	32:BK:49:ARG:NH2	2.49	0.45
12:AL:116:LYS:O	12:AL:117:TYR:HB2	2.16	0.45
14:AN:21:PHE:O	14:AN:22:ALA:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:41:THR:HG22	17:AQ:42:THR:N	2.30	0.45
22:BA:587:C:C5	22:BA:671:C:H1'	2.51	0.45
22:BA:813:U:H2'	22:BA:814:C:C6	2.51	0.45
22:BA:1014:A:C5	22:BA:1015:U:C5	3.04	0.45
22:BA:1106:G:C4	22:BA:1107:G:C8	3.03	0.45
22:BA:1142:A:N3	22:BA:1144:A:C8	2.84	0.45
22:BA:1616:A:H4'	22:BA:1617:C:OP2	2.16	0.45
28:BG:154:PRO:HD3	28:BG:162:VAL:O	2.15	0.45
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.45
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.45
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.45
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.45
30:BI:10:LYS:CB	30:BI:56:PRO:HB2	2.47	0.45
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.79	0.45
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.82	0.45
37:BP:40:LEU:HD21	37:BP:82:ASP:OD2	2.16	0.45
39:BR:39:LEU:HA	39:BR:49:ILE:HG23	1.98	0.45
42:BU:87:PHE:CE1	42:BU:92:LYS:HB2	2.52	0.45
49:B1:12:VAL:HG12	49:B1:13:SER:N	2.30	0.45
52:B4:1:MET:HE2	52:B4:34:LYS:HG2	1.98	0.45
1:CA:446:G:N3	1:CA:446:G:H2'	2.31	0.45
1:CA:560:A:H5'	1:CA:566:G:N2	2.30	0.45
1:CA:562:U:OP2	12:CL:14:ARG:NH2	2.49	0.45
1:CA:577:G:C8	1:CA:816:A:C2	3.04	0.45
1:CA:743:A:C6	1:CA:744:C:C4	3.04	0.45
1:CA:1360:A:C2	1:CA:1361:G:H1'	2.51	0.45
2:CB:87:CYS:HB2	2:CB:89:GLN:CD	2.41	0.45
3:CC:9:GLY:HA2	3:CC:12:LEU:HG	1.96	0.45
8:CH:101:ILE:HD12	8:CH:101:ILE:C	2.41	0.45
9:CI:13:LYS:O	9:CI:13:LYS:CG	2.63	0.45
9:CI:49:ARG:NH2	9:CI:53:GLU:HA	2.30	0.45
11:CK:107:ILE:HD11	11:CK:110:ILE:HG12	1.98	0.45
12:CL:23:ALA:O	12:CL:24:LEU:O	2.33	0.45
16:CP:79:ASN:ND2	16:CP:82:ALA:OXT	2.48	0.45
20:CT:67:ILE:HD12	20:CT:67:ILE:HA	1.76	0.45
22:DA:149:A:C5	22:DA:150:U:C4	3.04	0.45
22:DA:404:A:C1'	22:DA:405:U:OP2	2.63	0.45
22:DA:699:A:H2'	22:DA:700:G:H5'	1.98	0.45
22:DA:871:U:OP1	34:DM:4:PRO:HA	2.16	0.45
22:DA:1176:U:H2'	22:DA:1177:G:N9	2.31	0.45
22:DA:1529:G:O6	22:DA:1543:G:N2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1806:C:N4	22:DA:1807:G:C6	2.84	0.45
22:DA:1835:G:C4	22:DA:1836:C:C6	3.04	0.45
22:DA:1838:C:C5	22:DA:1899:A:C6	3.04	0.45
22:DA:2093:G:H4'	29:DH:24:GLY:C	2.39	0.45
22:DA:2307:G:H4'	22:DA:2308:G:O5'	2.16	0.45
22:DA:2307:G:N2	22:DA:2312:U:C2	2.84	0.45
22:DA:2314:A:C2	22:DA:2315:G:C5	3.04	0.45
22:DA:2324:U:O2	22:DA:2385:C:C5	2.69	0.45
22:DA:2902:C:OP1	22:DA:2903:U:C5	2.69	0.45
24:DC:67:PHE:CE2	24:DC:156:ARG:NH2	2.84	0.45
24:DC:67:PHE:O	24:DC:151:GLY:O	2.34	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
31:DJ:4:PHE:CD2	38:DQ:100:VAL:HG11	2.51	0.45
31:DJ:24:THR:O	31:DJ:25:LEU:C	2.59	0.45
42:DU:22:ARG:CZ	42:DU:73:PHE:CE2	2.99	0.45
45:DX:30:LEU:HB3	45:DX:31:PRO:HD2	1.97	0.45
1:AA:110:C:H2'	1:AA:111:G:O4'	2.17	0.45
1:AA:509:A:P	57:AA:1722:HOH:O	2.62	0.45
1:AA:590:U:H2'	1:AA:591:U:C6	2.52	0.45
1:AA:618:C:H1'	16:AP:14:ARG:NH1	2.32	0.45
1:AA:620:C:H1'	4:AD:132:ILE:CD1	2.42	0.45
1:AA:636:U:O2'	1:AA:637:C:H5'	2.16	0.45
1:AA:737:C:H2'	1:AA:738:C:C6	2.51	0.45
1:AA:914:A:C2	1:AA:915:A:C8	3.04	0.45
1:AA:927:G:C2	1:AA:1391:U:O2	2.69	0.45
1:AA:1004:A:OP1	1:AA:1024:G:O6	2.34	0.45
1:AA:1012:A:N1	1:AA:1018:G:N7	2.64	0.45
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.51	0.45
1:AA:1475:G:OP1	22:BA:1689:A:H1'	2.16	0.45
2:AB:54:LEU:N	2:AB:54:LEU:HD22	2.32	0.45
2:AB:58:ASN:O	2:AB:61:ALA:N	2.49	0.45
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.16	0.45
3:AC:59:ARG:HA	3:AC:63:SER:O	2.15	0.45
4:AD:107:PHE:CD1	4:AD:145:ILE:CD1	3.00	0.45
5:AE:98:PRO:O	5:AE:99:ALA:HB3	2.15	0.45
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.30	0.45
22:BA:276:U:O2'	22:BA:278:A:N7	2.47	0.45
22:BA:301:G:C4	22:BA:302:C:C5	3.04	0.45
22:BA:684:G:C6	22:BA:774:G:C4	3.04	0.45
22:BA:782:A:C2	24:BC:225:MET:SD	3.09	0.45
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.16	0.45
22:BA:1577:C:H2'	22:BA:1578:U:C1'	2.45	0.45
22:BA:1809:A:N1	22:BA:1810:A:C2	2.84	0.45
22:BA:1854:A:C2'	22:BA:1855:U:H5'	2.45	0.45
22:BA:2177:C:N4	22:BA:2178:C:O2	2.49	0.45
22:BA:2259:U:C5	22:BA:2427:C:N4	2.84	0.45
22:BA:2267:A:H5"	22:BA:2268:A:C5'	2.47	0.45
24:BC:72:ASP:HA	24:BC:118:SER:O	2.16	0.45
26:BE:7:ASP:C	26:BE:9:GLN:H	2.23	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
37:BP:31:TRP:CD2	37:BP:40:LEU:CD1	2.99	0.45
38:BQ:62:ILE:HG23	38:BQ:76:TYR:CE1	2.51	0.45
45:BX:77:LYS:HE3	45:BX:78:TYR:N	2.32	0.45
1:CA:516:U:O4	57:CA:1763:HOH:O	2.18	0.45
1:CA:517:G:H5'	1:CA:519:C:C2	2.51	0.45
1:CA:756:C:N3	1:CA:757:U:C6	2.84	0.45
1:CA:833:G:N2	1:CA:834:U:H1'	2.31	0.45
1:CA:1089:G:C5	1:CA:1090:U:C6	3.04	0.45
1:CA:1318:A:O2'	19:CS:37:ARG:HD3	2.16	0.45
1:CA:1366:C:O2'	10:CJ:62:ARG:NH2	2.50	0.45
1:CA:1439:G:C2	1:CA:1463:U:O2	2.70	0.45
1:CA:1484:C:H2'	1:CA:1485:U:O4'	2.16	0.45
6:CF:88:MET:HG2	6:CF:90:MET:HE2	1.99	0.45
8:CH:95:VAL:HG12	8:CH:96:MET:N	2.31	0.45
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.48	0.45
11:CK:126:LYS:O	21:CU:34:ARG:CZ	2.64	0.45
13:CM:63:PHE:O	13:CM:65:VAL:HG13	2.16	0.45
17:CQ:46:VAL:CG2	17:CQ:61:ILE:HD11	2.46	0.45
20:CT:73:ALA:O	20:CT:77:ALA:CB	2.64	0.45
22:DA:16:C:O3'	48:D0:11:SER:OG	2.28	0.45
22:DA:53:A:N7	22:DA:54:G:C5	2.84	0.45
22:DA:71:A:OP2	22:DA:113:U:H4'	2.16	0.45
22:DA:303:G:C6	22:DA:304:U:N3	2.84	0.45
22:DA:546:U:O2	22:DA:546:U:H3'	2.16	0.45
22:DA:982:C:H5"	22:DA:983:A:P	2.56	0.45
22:DA:1287:A:H2'	22:DA:1288:G:H5'	1.98	0.45
22:DA:1363:C:H2'	22:DA:1364:G:C8	2.51	0.45
22:DA:1694:C:H4'	22:DA:1695:G:O5'	2.14	0.45
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.30	0.45
22:DA:2478:A:C8	22:DA:2529:G:C6	3.04	0.45
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2637:U:O4	22:DA:2638:G:N1	2.49	0.45
22:DA:2815:C:HO2'	48:D0:41:HIS:HD1	1.61	0.45
25:DD:39:ASP:CG	25:DD:40:LEU:N	2.74	0.45
27:DF:126:GLY:O	27:DF:158:THR:HG23	2.16	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
30:DI:80:LEU:HD11	30:DI:133:ALA:HB2	1.98	0.45
34:DM:17:ASN:O	34:DM:38:ARG:HD3	2.16	0.45
42:DU:8:ASP:O	42:DU:9:ASP:HB2	2.16	0.45
43:DV:83:LYS:O	43:DV:85:LYS:N	2.49	0.45
52:D4:36:ARG:HG2	52:D4:37:GLN:H	1.81	0.45
1:AA:108:G:N3	1:AA:108:G:H5'	2.32	0.45
1:AA:193:C:O4'	20:AT:55:GLN:OE1	2.34	0.45
1:AA:260:G:H2'	1:AA:261:U:C6	2.52	0.45
1:AA:261:U:C6	20:AT:74:ARG:NH1	2.84	0.45
1:AA:353:A:H2'	1:AA:354:G:OP2	2.17	0.45
1:AA:815:A:N7	1:AA:1509:C:O2'	2.47	0.45
1:AA:859:G:H2'	1:AA:860:A:H8	1.76	0.45
1:AA:908:A:O2'	1:AA:909:A:H5'	2.16	0.45
1:AA:1429:A:C4	1:AA:1430:A:C8	3.04	0.45
2:AB:113:ARG:O	2:AB:117:LEU:HB2	2.16	0.45
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.98	0.45
3:AC:11:ARG:O	3:AC:14:ILE:O	2.34	0.45
5:AE:68:ARG:O	5:AE:71:MET:HE3	2.16	0.45
5:AE:111:MET:HE2	5:AE:125:ALA:HB1	1.99	0.45
6:AF:3:HIS:CB	6:AF:92:THR:HG23	2.46	0.45
7:AG:17:LYS:HD3	7:AG:18:PHE:CE2	2.51	0.45
11:AK:61:PHE:O	11:AK:64:GLN:N	2.50	0.45
18:AR:23:TYR:CE1	18:AR:24:LYS:HG2	2.52	0.45
20:AT:9:LYS:O	20:AT:13:GLN:HB2	2.16	0.45
21:AU:11:PRO:O	21:AU:12:PHE:CB	2.65	0.45
22:BA:1022:G:C5	22:BA:1140:C:N4	2.84	0.45
22:BA:1060:U:H4'	22:BA:1061:U:H3'	1.98	0.45
22:BA:1121:C:H2'	22:BA:1122:G:O4'	2.15	0.45
22:BA:1252:G:H5"	57:BA:3285:HOH:O	2.15	0.45
22:BA:1431:A:H2'	22:BA:1432:G:H8	1.81	0.45
22:BA:1754:A:N1	22:BA:2716:C:O2'	2.43	0.45
22:BA:1891:G:C6	22:BA:1892:C:C4	3.04	0.45
22:BA:1935:G:C6	22:BA:1962:C:C6	3.04	0.45
22:BA:1951:U:H2'	22:BA:1953:A:OP2	2.15	0.45
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.51	0.45
22:BA:2727:A:C6	22:BA:2728:U:O4	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2742:G:P	52:B4:24:ARG:HH12	2.39	0.45
27:BF:130:MET:HE2	27:BF:132:VAL:CG1	2.46	0.45
28:BG:150:ALA:C	28:BG:152:ARG:N	2.72	0.45
30:BI:100:LYS:HB3	30:BI:139:VAL:HB	1.97	0.45
30:BI:117:MET:HE2	30:BI:117:MET:HA	1.98	0.45
36:BO:93:ASP:C	36:BO:93:ASP:OD1	2.59	0.45
36:BO:93:ASP:OD1	36:BO:95:SER:N	2.43	0.45
37:BP:31:TRP:CE3	37:BP:40:LEU:HD12	2.51	0.45
41:BT:71:GLY:O	41:BT:73:ARG:N	2.46	0.45
48:B0:54:VAL:O	48:B0:55:ILE:C	2.58	0.45
49:B1:25:LYS:NZ	49:B1:52:ALA:O	2.43	0.45
1:CA:68:G:C6	1:CA:69:G:H1'	2.51	0.45
1:CA:73:C:HO2'	1:CA:74:A:C5'	2.27	0.45
1:CA:258:G:C2	1:CA:269:C:O2	2.69	0.45
1:CA:607:A:C2	1:CA:608:A:N3	2.84	0.45
1:CA:681:A:C2	1:CA:710:G:C4	3.04	0.45
1:CA:1170:A:H3'	1:CA:1171:A:H8	1.81	0.45
2:CB:138:THR:C	2:CB:140:GLU:N	2.73	0.45
5:CE:133:PRO:O	5:CE:137:VAL:HG13	2.17	0.45
6:CF:86:ARG:CG	6:CF:86:ARG:NH1	2.77	0.45
7:CG:70:ARG:HG3	7:CG:96:ARG:HG2	1.97	0.45
9:CI:52:LEU:HD13	9:CI:57:MET:HG2	1.98	0.45
15:CO:11:ILE:HA	15:CO:14:GLU:OE1	2.17	0.45
16:CP:29:ASN:N	16:CP:29:ASN:OD1	2.48	0.45
22:DA:452:G:N2	22:DA:457:A:H1'	2.32	0.45
22:DA:487:C:C2	22:DA:494:G:N2	2.84	0.45
22:DA:696:G:C2	22:DA:767:U:O2	2.70	0.45
22:DA:1127:A:C2'	22:DA:1128:G:H5"	2.46	0.45
22:DA:1353:A:C8	22:DA:1378:A:N6	2.83	0.45
22:DA:1845:G:OP1	24:DC:256:LYS:NZ	2.44	0.45
22:DA:1869:G:N2	22:DA:1871:A:O2'	2.50	0.45
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.51	0.45
22:DA:2347:C:O2'	49:D1:39:PHE:HB3	2.15	0.45
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.51	0.45
24:DC:160:THR:H	24:DC:195:VAL:HG13	1.82	0.45
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.50	0.45
1:AA:468:A:N3	1:AA:468:A:H5"	2.31	0.45
1:AA:652:U:C2	1:AA:752:G:N2	2.85	0.45
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.16	0.45
1:AA:1043:G:O6	1:AA:1044:A:N6	2.49	0.45
1:AA:1154:G:H2'	1:AA:1154:G:N3	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:61:ALA:HA	2:AB:65:GLY:CA	2.46	0.45
2:AB:94:HIS:ND1	2:AB:146:ASN:HB2	2.31	0.45
2:AB:165:ASP:C	2:AB:165:ASP:OD1	2.58	0.45
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.16	0.45
3:AC:83:ASP:O	3:AC:84:VAL:C	2.58	0.45
4:AD:4:TYR:CE2	4:AD:11:LEU:HD11	2.52	0.45
6:AF:52:ASN:O	6:AF:53:LYS:HB3	2.17	0.45
10:AJ:40:ILE:O	10:AJ:72:ARG:HA	2.16	0.45
12:AL:59:ASN:C	12:AL:59:ASN:OD1	2.57	0.45
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.64	0.45
13:AM:88:GLY:C	13:AM:90:ARG:N	2.72	0.45
15:AO:20:ASN:O	15:AO:22:THR:N	2.50	0.45
22:BA:324:A:N6	22:BA:338:G:O2'	2.40	0.45
22:BA:753:A:H2'	22:BA:754:U:C6	2.51	0.45
22:BA:1059:G:C6	22:BA:1080:A:C2	3.05	0.45
22:BA:2467:C:OP1	52:B4:8:LYS:NZ	2.29	0.45
27:BF:119:ALA:HB1	27:BF:167:ARG:HD2	1.98	0.45
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.45
30:BI:10:LYS:HB3	30:BI:56:PRO:HB2	1.98	0.45
30:BI:83:ALA:HB1	30:BI:109:ILE:CD1	2.46	0.45
30:BI:110:ALA:O	30:BI:113:LYS:HG3	2.17	0.45
36:BO:66:GLY:HA2	36:BO:102:ARG:HH22	1.81	0.45
42:BU:61:LYS:HA	42:BU:61:LYS:HE3	1.99	0.45
1:CA:146:G:N2	1:CA:147:G:H1'	2.31	0.45
1:CA:160:A:H4'	1:CA:344:A:N1	2.32	0.45
1:CA:775:G:O2'	1:CA:776:G:H5'	2.16	0.45
1:CA:861:G:C6	1:CA:862:C:C4	3.05	0.45
2:CB:45:LYS:HE3	2:CB:49:MET:HE1	1.98	0.45
2:CB:208:ARG:O	2:CB:210:VAL:N	2.49	0.45
5:CE:11:LEU:HG	5:CE:12:GLN:N	2.31	0.45
5:CE:13:GLU:HB2	5:CE:39:VAL:HG12	1.99	0.45
13:CM:40:ALA:O	13:CM:41:GLU:C	2.59	0.45
14:CN:13:ARG:HG2	14:CN:54:ASP:CG	2.40	0.45
16:CP:79:ASN:O	16:CP:80:LYS:HB2	2.17	0.45
22:DA:70:G:HO2'	22:DA:71:A:P	2.40	0.45
22:DA:236:C:H4'	22:DA:431:U:O2'	2.17	0.45
22:DA:308:G:N1	22:DA:309:A:C2	2.84	0.45
22:DA:324:A:N6	22:DA:338:G:O2'	2.47	0.45
22:DA:327:G:H2'	22:DA:328:U:O4'	2.15	0.45
22:DA:752:A:O2'	22:DA:753:A:P	2.74	0.45
22:DA:1454:C:H5'	35:DN:63:ARG:HD3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1646:C:H5”	22:DA:1647:U:C5’	2.47	0.45
22:DA:2258:C:O2’	22:DA:2427:C:OP2	2.25	0.45
22:DA:2353:G:H2’	22:DA:2354:C:O4’	2.16	0.45
22:DA:2415:G:N1	22:DA:2416:C:C2	2.83	0.45
22:DA:2580:U:H5”	22:DA:2581:G:OP2	2.16	0.45
22:DA:2815:C:C4	22:DA:2816:G:N7	2.85	0.45
24:DC:238:ARG:O	24:DC:239:ASN:O	2.35	0.45
25:DD:56:LYS:O	25:DD:58:ASN:N	2.50	0.45
25:DD:101:PHE:O	25:DD:102:ALA:C	2.58	0.45
26:DE:136:GLN:O	26:DE:138:LEU:N	2.49	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
34:DM:53:MET:HE1	34:DM:103:TYR:CB	2.46	0.45
34:DM:135:VAL:O	34:DM:136:MET:CB	2.64	0.45
36:DO:7:ARG:CD	36:DO:97:PHE:CZ	2.99	0.45
41:DT:2:ILE:HG23	41:DT:3:ARG:C	2.41	0.45
41:DT:17:SER:O	41:DT:18:GLU:C	2.59	0.45
43:DV:44:HIS:O	43:DV:45:ASP:C	2.59	0.45
50:D2:30:VAL:O	50:D2:34:ARG:HG3	2.17	0.45
1:AA:39:G:C2	1:AA:40:C:C5	3.04	0.45
1:AA:626:G:C6	1:AA:627:G:C5	3.04	0.45
2:AB:128:LYS:HG3	2:AB:129:LEU:N	2.30	0.45
2:AB:151:ILE:O	2:AB:153:ASP:N	2.49	0.45
11:AK:16:VAL:O	11:AK:17:SER:HB3	2.15	0.45
13:AM:6:GLY:O	13:AM:7:ILE:C	2.59	0.45
22:BA:580:U:O3’	38:BQ:31:VAL:HG13	2.16	0.45
22:BA:651:G:OP1	51:B3:17:THR:OG1	2.34	0.45
22:BA:693:A:C5	22:BA:694:U:C5	3.04	0.45
22:BA:868:U:C4	22:BA:869:G:N7	2.85	0.45
22:BA:1344:U:O2’	22:BA:1345:C:P	2.74	0.45
22:BA:2131:U:H5’	22:BA:2132:U:H5”	1.98	0.45
22:BA:2189:U:H2’	22:BA:2190:G:O4’	2.16	0.45
22:BA:2223:G:OP1	24:BC:171:TYR:OH	2.23	0.45
22:BA:2292:U:H2’	22:BA:2293:G:H8	1.79	0.45
22:BA:2538:C:H2’	22:BA:2539:C:C6	2.52	0.45
24:BC:125:LYS:HG2	24:BC:128:ASN:HD22	1.80	0.45
25:BD:150:GLN:O	25:BD:153:GLY:N	2.50	0.45
26:BE:7:ASP:C	26:BE:9:GLN:N	2.74	0.45
28:BG:101:ASN:O	28:BG:101:ASN:CG	2.59	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.41	0.45
36:BO:7:ARG:HA	36:BO:10:ARG:CZ	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:35:ILE:HG21	36:BO:71:ALA:HA	1.99	0.45
40:BS:50:VAL:CG1	40:BS:105:VAL:HG23	2.46	0.45
46:BY:14:LEU:HA	46:BY:17:GLU:HB3	1.97	0.45
46:BY:23:ARG:HA	46:BY:27:ASN:OD1	2.17	0.45
47:BZ:54:MET:HE3	47:BZ:54:MET:HB2	1.89	0.45
53:B5:65:LEU:HD11	53:B5:191:ARG:HA	1.97	0.45
1:CA:182:A:C8	1:CA:184:G:N7	2.85	0.45
1:CA:546:A:P	4:CD:69:GLU:HB3	2.56	0.45
1:CA:782:A:C8	1:CA:783:C:C5	3.05	0.45
1:CA:791:G:C5	1:CA:792:A:N7	2.85	0.45
1:CA:1279:G:O2'	1:CA:1281:C:OP2	2.29	0.45
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.51	0.45
2:CB:72:THR:OG1	2:CB:169:GLU:OE1	2.28	0.45
3:CC:10:ILE:HD12	14:CN:98:LYS:HG3	1.99	0.45
5:CE:56:VAL:O	5:CE:60:ILE:HG23	2.17	0.45
6:CF:38:ARG:HB3	6:CF:97:THR:HG23	1.99	0.45
9:CI:28:ILE:HG21	9:CI:35:LEU:HB2	1.98	0.45
12:CL:64:THR:HG23	12:CL:93:VAL:HA	1.97	0.45
15:CO:37:ASN:O	15:CO:40:GLN:N	2.49	0.45
16:CP:4:ILE:HD11	16:CP:65:ALA:HB1	1.97	0.45
16:CP:52:LEU:HD23	16:CP:53:ASP:N	2.31	0.45
17:CQ:14:SER:OG	17:CQ:17:MET:CE	2.65	0.45
17:CQ:29:VAL:O	17:CQ:29:VAL:HG22	2.14	0.45
21:CU:15:ALA:O	21:CU:17:ARG:N	2.49	0.45
21:CU:18:ARG:O	21:CU:21:ARG:N	2.49	0.45
22:DA:54:G:C6	22:DA:55:G:N7	2.85	0.45
22:DA:579:G:C2	22:DA:1262:A:C5	3.04	0.45
22:DA:734:A:C5	22:DA:735:A:C8	3.05	0.45
22:DA:861:A:H2'	22:DA:862:G:O4'	2.17	0.45
22:DA:1262:A:N1	22:DA:1263:U:C2	2.84	0.45
22:DA:1358:G:N2	22:DA:1374:G:C6	2.84	0.45
22:DA:2409:G:C6	22:DA:2410:G:C5	3.05	0.45
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.31	0.45
22:DA:2637:U:C4	22:DA:2638:G:C6	3.05	0.45
22:DA:2685:G:C4	22:DA:2686:G:C8	3.04	0.45
27:DF:142:ASP:O	27:DF:143:TYR:C	2.59	0.45
28:DG:123:ALA:CB	28:DG:133:LEU:HA	2.46	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
30:DI:57:VAL:HG23	30:DI:71:THR:N	2.32	0.45
33:DL:29:LYS:O	33:DL:30:THR:CB	2.64	0.45
35:DN:9:GLN:O	35:DN:10:LEU:C	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:61:LEU:HD12	41:DT:61:LEU:C	2.42	0.45
45:DX:17:ASN:HB2	45:DX:25:THR:HB	1.97	0.45
1:AA:34:C:H2'	1:AA:35:G:C8	2.51	0.45
1:AA:108:G:O6	20:AT:10:ARG:HG2	2.16	0.45
1:AA:429:U:H4'	1:AA:430:A:OP1	2.17	0.45
1:AA:451:A:C8	1:AA:452:A:N1	2.84	0.45
1:AA:761:G:H2'	1:AA:762:U:H6	1.81	0.45
1:AA:955:U:O4'	1:AA:1227:A:N6	2.49	0.45
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.17	0.45
1:AA:1118:U:C5'	9:AI:106:ARG:HG3	2.47	0.45
1:AA:1152:A:H5"	10:AJ:15:HIS:CD2	2.52	0.45
1:AA:1299:A:C2	1:AA:1301:U:C2	3.04	0.45
1:AA:1319:A:C8	1:AA:1323:G:C5	3.05	0.45
1:AA:1324:A:C5	1:AA:1325:C:C4	3.04	0.45
2:AB:71:GLY:O	2:AB:93:ASN:HA	2.17	0.45
6:AF:49:TYR:CD1	6:AF:49:TYR:C	2.94	0.45
6:AF:53:LYS:O	6:AF:54:LEU:CD1	2.64	0.45
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	1.99	0.45
11:AK:74:VAL:C	11:AK:76:GLU:H	2.25	0.45
22:BA:222:A:C6	22:BA:224:U:C2	3.05	0.45
22:BA:250:G:O6	22:BA:251:A:C6	2.69	0.45
22:BA:616:A:C2	22:BA:617:G:H1'	2.52	0.45
22:BA:877:A:N6	22:BA:899:A:N6	2.64	0.45
22:BA:1696:G:C6	22:BA:1697:G:C4	3.04	0.45
22:BA:1799:G:O2'	24:BC:180:GLU:OE2	2.31	0.45
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.16	0.45
22:BA:1944:U:C5	22:BA:1955:U:C2	3.04	0.45
22:BA:1963:U:H6	22:BA:1963:U:O5'	2.00	0.45
22:BA:2311:A:N7	27:BF:77:PHE:CD1	2.85	0.45
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.52	0.45
22:BA:2839:G:H2'	22:BA:2840:C:O5'	2.15	0.45
23:BB:66:A:O5'	23:BB:108:A:N6	2.49	0.45
28:BG:176:LYS:O	28:BG:177:LYS:HB2	2.16	0.45
30:BI:124:ALA:C	30:BI:126:THR:N	2.72	0.45
32:BK:1:MET:HE3	32:BK:32:TYR:CE2	2.51	0.45
32:BK:2:ILE:N	32:BK:33:ALA:O	2.47	0.45
35:BN:31:HIS:C	35:BN:33:ILE:H	2.24	0.45
39:BR:14:VAL:CG1	39:BR:98:ILE:HG13	2.47	0.45
1:CA:403:C:O2'	1:CA:404:G:H5'	2.17	0.45
1:CA:728:A:C6	1:CA:729:A:N6	2.85	0.45
1:CA:872:A:C4	1:CA:874:G:C8	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:974:A:OP1	14:CN:69:ARG:NH1	2.49	0.45
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.81	0.45
5:CE:80:THR:HA	5:CE:120:VAL:HG12	1.99	0.45
10:CJ:84:VAL:O	10:CJ:88:MET:HB2	2.17	0.45
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.17	0.45
12:CL:110:ARG:NE	12:CL:117:TYR:CE2	2.84	0.45
13:CM:54:ASP:HA	13:CM:57:ARG:CB	2.47	0.45
15:CO:56:LEU:O	15:CO:57:LEU:C	2.59	0.45
17:CQ:45:HIS:ND1	17:CQ:70:THR:HG21	2.32	0.45
18:CR:59:ILE:O	18:CR:63:ARG:HD2	2.16	0.45
22:DA:143:C:O2	41:DT:1:MET:N	2.46	0.45
22:DA:189:G:C4	22:DA:205:G:N2	2.84	0.45
22:DA:527:C:H4'	22:DA:528:A:O5'	2.17	0.45
22:DA:983:A:C6	22:DA:984:A:C2	3.04	0.45
22:DA:1287:A:O4'	35:DN:103:ARG:NH1	2.50	0.45
22:DA:1304:A:C2	22:DA:1305:C:C6	3.05	0.45
22:DA:1328:A:H2'	22:DA:1330:C:C5	2.52	0.45
22:DA:1469:A:N1	22:DA:1470:A:C6	2.84	0.45
22:DA:1831:G:C5	22:DA:1832:C:C4	3.05	0.45
22:DA:2287:A:C8	22:DA:2289:G:C8	3.04	0.45
22:DA:2692:G:N3	22:DA:2847:U:O2'	2.46	0.45
22:DA:2834:G:O6	22:DA:2879:A:C2'	2.64	0.45
23:DB:37:C:C5	23:DB:38:C:C4	3.05	0.45
26:DE:128:ALA:O	26:DE:130:LYS:N	2.50	0.45
27:DF:58:ALA:O	27:DF:61:SER:O	2.34	0.45
27:DF:103:LEU:O	27:DF:108:VAL:HG23	2.16	0.45
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.16	0.45
40:DS:61:ASN:O	40:DS:62:ASP:CB	2.64	0.45
40:DS:84:ARG:HB2	40:DS:96:ILE:HG12	1.98	0.45
41:DT:61:LEU:CD1	41:DT:62:VAL:N	2.79	0.45
45:DX:41:GLU:O	45:DX:44:LYS:HD2	2.17	0.45
49:D1:17:THR:HG21	49:D1:42:VAL:HB	1.97	0.45
1:AA:260:G:O6	57:AA:1702:HOH:O	2.20	0.45
1:AA:604:G:C6	1:AA:605:U:C4	3.05	0.45
1:AA:787:A:C5	1:AA:788:U:C5	3.03	0.45
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.32	0.45
1:AA:1306:A:C5	1:AA:1307:U:C5	3.04	0.45
2:AB:42:ASN:O	2:AB:43:LEU:C	2.58	0.45
2:AB:80:VAL:CA	2:AB:82:ASP:OD2	2.65	0.45
2:AB:96:TRP:O	2:AB:97:LEU:C	2.59	0.45
2:AB:104:TRP:CZ2	2:AB:154:MET:CB	3.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:167:ASP:O	2:AB:168:HIS:C	2.59	0.45
4:AD:27:ALA:O	4:AD:28:ILE:C	2.60	0.45
6:AF:45:ARG:O	6:AF:56:LYS:HA	2.15	0.45
6:AF:63:ASN:ND2	6:AF:96:VAL:CG2	2.79	0.45
21:AU:41:PRO:O	21:AU:45:ARG:HD3	2.16	0.45
22:BA:500:G:H22	22:BA:502:A:H3'	1.77	0.45
22:BA:651:G:P	51:B3:17:THR:HG1	2.39	0.45
22:BA:744:U:O4	22:BA:745:G:C6	2.70	0.45
22:BA:863:A:O2'	22:BA:864:G:H5'	2.16	0.45
22:BA:1856:U:C4	22:BA:1857:G:C6	3.04	0.45
22:BA:2127:G:H5'	22:BA:2128:G:OP1	2.15	0.45
22:BA:2221:G:C6	22:BA:2222:C:C4	3.05	0.45
22:BA:2286:G:H5'	22:BA:2287:A:O4'	2.16	0.45
22:BA:2360:G:C1'	33:BL:60:ARG:HD3	2.47	0.45
22:BA:2852:G:C6	22:BA:2853:C:N3	2.84	0.45
27:BF:81:GLN:HG3	27:BF:82:GLY:N	2.32	0.45
28:BG:8:PRO:HB3	28:BG:51:THR:HG22	1.98	0.45
28:BG:127:THR:HG22	28:BG:128:GLN:H	1.81	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
30:BI:16:GLY:HA2	30:BI:51:LYS:CG	2.46	0.45
41:BT:69:ARG:HA	41:BT:74:ILE:HA	1.99	0.45
44:BW:32:LEU:O	44:BW:33:ALA:C	2.59	0.45
53:B5:43:GLU:HA	53:B5:178:LYS:HA	1.98	0.45
1:CA:570:G:C6	1:CA:873:A:N1	2.85	0.45
1:CA:671:G:O2'	1:CA:672:U:H5'	2.16	0.45
1:CA:743:A:C6	1:CA:744:C:C5	3.05	0.45
1:CA:821:G:H2'	1:CA:822:U:C6	2.51	0.45
1:CA:991:U:H4'	1:CA:992:U:H5"	1.98	0.45
1:CA:1036:A:N3	1:CA:1036:A:H2'	2.31	0.45
2:CB:85:LEU:C	2:CB:85:LEU:HD12	2.41	0.45
5:CE:104:GLY:O	5:CE:105:ILE:CB	2.65	0.45
5:CE:122:ASN:O	5:CE:123:VAL:C	2.60	0.45
7:CG:146:GLU:CD	7:CG:149:LYS:HE3	2.42	0.45
19:CS:80:TYR:O	19:CS:81:ARG:HB2	2.16	0.45
21:CU:31:GLU:HG2	21:CU:32:VAL:N	2.32	0.45
22:DA:30:G:C5	22:DA:31:C:C4	3.05	0.45
22:DA:147:C:C4	22:DA:148:U:O4	2.69	0.45
22:DA:563:A:C2	22:DA:2018:G:H1'	2.51	0.45
22:DA:1153:C:H2'	22:DA:1154:G:O4'	2.16	0.45
22:DA:1332:G:C6	22:DA:1609:A:N7	2.85	0.45
22:DA:1409:U:H2'	22:DA:1410:G:O4'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1486:U:C2	22:DA:1504:A:C2	3.04	0.45
22:DA:2009:A:N6	57:DA:3370:HOH:O	2.36	0.45
22:DA:2228:G:C5	22:DA:2229:U:C5	3.04	0.45
22:DA:2262:U:O2'	22:DA:2263:C:H5'	2.16	0.45
22:DA:2714:G:P	57:DA:3544:HOH:O	2.71	0.45
22:DA:2734:A:N7	22:DA:2735:G:N7	2.65	0.45
55:DA:3001:VIR:O15	55:DA:3001:VIR:C19	2.64	0.45
23:DB:40:U:N3	23:DB:44:G:OP2	2.37	0.45
23:DB:42:C:C4	27:DF:88:LYS:HE3	2.52	0.45
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.16	0.45
27:DF:36:LEU:HD11	27:DF:99:PHE:CZ	2.52	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.94	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
44:DW:38:VAL:CG2	44:DW:80:ILE:CD1	2.94	0.45
1:AA:65:A:C4	1:AA:381:C:C5	3.05	0.45
1:AA:660:C:OP1	15:AO:5:THR:HG21	2.17	0.45
1:AA:665:A:C2	1:AA:732:C:C4	3.05	0.45
1:AA:828:U:O2	2:AB:25:PRO:HG2	2.17	0.45
1:AA:1128:C:H4'	1:AA:1148:U:O2	2.16	0.45
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.52	0.45
1:AA:1521:C:C2	1:AA:1522:U:C6	3.05	0.45
2:AB:95:ARG:NH1	2:AB:95:ARG:HG2	2.32	0.45
2:AB:157:LEU:O	2:AB:158:PRO:C	2.59	0.45
3:AC:22:TRP:CD1	3:AC:59:ARG:HD3	2.52	0.45
5:AE:81:LEU:HB3	5:AE:147:MET:HE1	1.98	0.45
8:AH:2:SER:C	8:AH:4:GLN:N	2.74	0.45
9:AI:95:ARG:HA	9:AI:98:LEU:HB2	1.98	0.45
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.17	0.45
16:AP:21:VAL:HG12	16:AP:33:ILE:HD12	1.99	0.45
17:AQ:67:LEU:O	17:AQ:68:SER:CB	2.65	0.45
18:AR:20:GLU:O	18:AR:21:ILE:C	2.60	0.45
21:AU:6:VAL:O	21:AU:6:VAL:HG23	2.15	0.45
22:BA:136:G:C6	22:BA:137:U:O4	2.69	0.45
22:BA:503:A:H4'	22:BA:504:A:O5'	2.17	0.45
22:BA:531:C:C5	22:BA:2035:G:C2	3.05	0.45
22:BA:693:A:C6	22:BA:694:U:C4	3.05	0.45
22:BA:812:C:H4'	38:BQ:13:ARG:HH22	1.81	0.45
22:BA:996:A:OP2	38:BQ:93:LYS:NZ	2.38	0.45
22:BA:1024:G:N2	22:BA:1142:A:H2	2.15	0.45
22:BA:1185:G:H5"	22:BA:1186:G:P	2.56	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.17	0.45
22:BA:1809:A:C6	22:BA:1810:A:N1	2.85	0.45
22:BA:2178:C:H2'	22:BA:2179:C:C5	2.52	0.45
22:BA:2315:G:H2'	22:BA:2316:G:H8	1.80	0.45
23:BB:83:G:C6	23:BB:84:G:C5	3.05	0.45
27:BF:40:VAL:CG1	27:BF:41:GLY:N	2.80	0.45
31:BJ:58:ASN:HA	31:BJ:126:ALA:O	2.16	0.45
40:BS:96:ILE:HD12	40:BS:98:LYS:HG3	1.99	0.45
52:B4:26:ILE:N	52:B4:26:ILE:CD1	2.79	0.45
1:CA:143:A:H5'	1:CA:144:G:H5'	1.98	0.45
1:CA:213:G:C5	1:CA:214:C:C2	3.04	0.45
1:CA:218:U:C4	1:CA:219:U:C5	3.04	0.45
1:CA:484:G:C5	1:CA:486:U:H1'	2.51	0.45
1:CA:620:C:C6	4:CD:132:ILE:HD13	2.51	0.45
1:CA:743:A:C5	1:CA:744:C:C5	3.05	0.45
1:CA:756:C:C4	1:CA:757:U:C5	3.05	0.45
1:CA:1408:A:N1	1:CA:1494:G:C5	2.85	0.45
1:CA:1408:A:N1	1:CA:1494:G:C6	2.85	0.45
2:CB:174:LYS:HG2	2:CB:175:GLU:N	2.31	0.45
4:CD:31:LYS:N	4:CD:31:LYS:CD	2.78	0.45
8:CH:27:MET:HB2	8:CH:28:PRO:HD2	1.99	0.45
9:CI:12:ARG:HG3	9:CI:12:ARG:O	2.17	0.45
13:CM:3:ARG:C	13:CM:4:ILE:HG12	2.40	0.45
13:CM:85:CYS:O	13:CM:89:LEU:HG	2.16	0.45
15:CO:17:ARG:O	15:CO:18:ASP:HB3	2.16	0.45
21:CU:10:GLU:CB	21:CU:11:PRO:HD3	2.47	0.45
22:DA:38:A:C6	22:DA:39:G:C5	3.05	0.45
22:DA:53:A:N3	22:DA:179:C:H4'	2.32	0.45
22:DA:230:G:C2	22:DA:231:A:C8	3.04	0.45
22:DA:352:A:C6	22:DA:353:C:N3	2.85	0.45
22:DA:480:A:O3'	42:DU:44:LYS:HG3	2.16	0.45
22:DA:743:A:OP1	25:DD:135:GLY:HA2	2.17	0.45
22:DA:1211:C:H5"	22:DA:1212:G:C8	2.51	0.45
22:DA:1248:G:C5	38:DQ:3:ARG:HB2	2.52	0.45
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.17	0.45
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.17	0.45
22:DA:1754:A:H4'	37:DP:99:TYR:CE2	2.52	0.45
22:DA:1984:G:C6	22:DA:1985:C:C4	3.05	0.45
22:DA:2283:C:C4	22:DA:2389:G:C5	3.05	0.45
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.81	0.45
22:DA:2773:C:H2'	22:DA:2774:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:29:A:OP2	36:DO:32:PRO:HD2	2.17	0.45
27:DF:170:LEU:O	27:DF:175:PHE:HB3	2.17	0.45
31:DJ:44:TYR:C	31:DJ:44:TYR:CD2	2.95	0.45
32:DK:47:ILE:HB	32:DK:48:PRO:HD2	1.98	0.45
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.17	0.45
35:DN:90:ARG:NH2	35:DN:116:VAL:HG21	2.32	0.45
35:DN:100:CYS:CB	35:DN:112:TYR:HD1	2.30	0.45
39:DR:29:THR:HG23	39:DR:65:ALA:HA	1.99	0.45
42:DU:4:LYS:HG2	42:DU:85:PHE:CE2	2.51	0.45
44:DW:49:ALA:O	44:DW:50:ASN:HB2	2.17	0.45
45:DX:33:LEU:O	45:DX:34:HIS:CG	2.69	0.45
52:D4:30:GLU:HG3	52:D4:32:LYS:HB2	1.99	0.45
1:AA:19:A:C2	1:AA:917:G:C2	3.05	0.45
1:AA:229:U:O2'	1:AA:230:G:H5'	2.17	0.45
1:AA:409:U:H2'	1:AA:410:G:C8	2.52	0.45
1:AA:455:G:N3	1:AA:478:A:C2	2.84	0.45
1:AA:532:A:O4'	1:AA:532:A:OP2	2.35	0.45
1:AA:555:U:H2'	1:AA:556:C:C6	2.52	0.45
1:AA:581:G:C5	1:AA:758:C:C5	3.05	0.45
1:AA:622:A:C8	1:AA:623:C:C6	3.04	0.45
1:AA:772:U:H2'	1:AA:773:G:O5'	2.17	0.45
1:AA:858:G:O2'	1:AA:859:G:C5'	2.65	0.45
1:AA:973:G:H1'	10:AJ:56:HIS:HD2	1.82	0.45
1:AA:1042:A:H2'	1:AA:1043:G:C1'	2.47	0.45
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.16	0.45
1:AA:1306:A:C2	1:AA:1307:U:H1'	2.51	0.45
1:AA:1370:G:O5'	9:AI:111:VAL:HG21	2.16	0.45
1:AA:1446:A:N6	1:AA:1447:A:N6	2.65	0.45
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.32	0.45
2:AB:144:LEU:N	2:AB:144:LEU:HD23	2.32	0.45
3:AC:154:SER:O	3:AC:196:ILE:HG23	2.16	0.45
4:AD:98:LEU:C	4:AD:100:ASN:N	2.75	0.45
4:AD:107:PHE:CD1	4:AD:145:ILE:HD11	2.52	0.45
5:AE:157:ARG:C	5:AE:159:LYS:N	2.74	0.45
9:AI:97:GLU:CD	9:AI:97:GLU:N	2.75	0.45
10:AJ:25:ILE:HG22	10:AJ:26:VAL:N	2.31	0.45
12:AL:80:ILE:C	12:AL:102:LEU:HD23	2.42	0.45
13:AM:20:THR:HA	13:AM:25:VAL:HG23	1.99	0.45
20:AT:28:MET:O	20:AT:32:ILE:HG13	2.17	0.45
22:BA:80:G:O5'	22:BA:346:A:H1'	2.17	0.45
22:BA:536:G:O6	22:BA:537:G:C2	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1041:G:C6	22:BA:1115:G:O6	2.69	0.45
22:BA:1071:G:P	22:BA:1071:G:H8	2.40	0.45
22:BA:1363:C:H2'	22:BA:1364:G:C8	2.52	0.45
22:BA:1735:A:C2	22:BA:1736:U:H1'	2.52	0.45
22:BA:1847:A:H2'	22:BA:1848:A:N7	2.31	0.45
22:BA:2187:U:H2'	22:BA:2188:U:C1'	2.47	0.45
22:BA:2694:G:C5	22:BA:2695:U:C4	3.05	0.45
22:BA:2714:G:O2'	22:BA:2715:C:H5'	2.17	0.45
24:BC:46:ASN:O	24:BC:48:ARG:HG2	2.16	0.45
26:BE:5:LEU:O	26:BE:6:LYS:HB3	2.17	0.45
26:BE:79:ARG:O	26:BE:80:SER:HB2	2.17	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
31:BJ:96:ARG:HD3	31:BJ:99:ARG:HG2	1.99	0.45
33:BL:9:ALA:HB3	33:BL:12:SER:OG	2.17	0.45
34:BM:6:ARG:O	34:BM:7:THR:CG2	2.65	0.45
35:BN:58:ASP:CG	35:BN:63:ARG:NH2	2.75	0.45
41:BT:18:GLU:CD	41:BT:18:GLU:N	2.75	0.45
1:CA:109:A:N1	1:CA:327:A:C6	2.85	0.45
1:CA:282:A:N7	1:CA:283:U:C5	2.85	0.45
1:CA:938:A:C2	1:CA:1345:U:O4	2.70	0.45
1:CA:978:A:O2'	1:CA:1322:C:H5	2.00	0.45
1:CA:1004:A:N6	1:CA:1005:A:C6	2.85	0.45
1:CA:1133:G:H2'	1:CA:1133:G:N3	2.32	0.45
1:CA:1225:A:N3	1:CA:1225:A:C2'	2.80	0.45
4:CD:202:GLU:OE1	5:CE:105:ILE:HG21	2.17	0.45
5:CE:102:GLY:C	5:CE:104:GLY:N	2.74	0.45
8:CH:14:ILE:O	8:CH:15:ARG:C	2.60	0.45
8:CH:86:TYR:CD2	8:CH:124:GLU:HB2	2.52	0.45
9:CI:21:ILE:HG12	9:CI:62:ASP:O	2.16	0.45
17:CQ:47:HIS:N	17:CQ:73:TRP:O	2.47	0.45
19:CS:16:LEU:O	19:CS:20:GLU:HG2	2.17	0.45
20:CT:73:ALA:O	20:CT:77:ALA:HB2	2.17	0.45
21:CU:34:ARG:NE	21:CU:35:ARG:HB2	2.31	0.45
22:DA:574:A:H4'	22:DA:575:A:C5'	2.47	0.45
22:DA:696:G:O2'	22:DA:697:G:H5'	2.16	0.45
22:DA:1544:A:N1	22:DA:1545:A:C2	2.84	0.45
22:DA:2264:C:O2	22:DA:2277:G:N2	2.49	0.45
22:DA:2345:G:H4'	22:DA:2346:A:O5'	2.17	0.45
22:DA:2468:A:C2	22:DA:2481:G:C2	3.05	0.45
22:DA:2531:A:H5"	28:DG:157:TYR:CZ	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.17	0.45
22:DA:2834:G:O6	22:DA:2879:A:H2'	2.17	0.45
24:DC:17:VAL:CG2	24:DC:204:VAL:HG22	2.47	0.45
24:DC:125:LYS:HB2	24:DC:126:PRO:HD2	1.98	0.45
27:DF:135:GLN:OE1	27:DF:135:GLN:N	2.48	0.45
32:DK:63:VAL:HB	32:DK:103:VAL:HG12	1.99	0.45
32:DK:91:SER:O	32:DK:92:GLU:O	2.35	0.45
35:DN:37:THR:OG1	35:DN:40:LYS:HB2	2.17	0.45
47:DZ:41:THR:HG23	47:DZ:44:ILE:HG12	1.99	0.45
1:AA:7:A:N6	5:AE:97:GLN:OE1	2.50	0.45
1:AA:47:C:O2	1:AA:49:U:C4	2.69	0.45
1:AA:695:A:C6	1:AA:696:A:N1	2.85	0.45
1:AA:1145:A:O2'	1:AA:1146:A:H5"	2.15	0.45
1:AA:1299:A:C5	1:AA:1301:U:O2	2.70	0.45
2:AB:68:LEU:CD2	2:AB:92:VAL:HG23	2.46	0.45
2:AB:154:MET:HE2	2:AB:158:PRO:HG3	1.98	0.45
2:AB:200:ILE:O	2:AB:201:PRO:O	2.35	0.45
4:AD:151:LYS:HB2	4:AD:156:LYS:HE3	1.99	0.45
4:AD:160:GLU:C	4:AD:162:ALA:N	2.74	0.45
9:AI:49:ARG:C	9:AI:51:PRO:HD2	2.42	0.45
9:AI:85:ARG:O	9:AI:88:MET:CB	2.65	0.45
20:AT:58:VAL:HG12	20:AT:72:ALA:CB	2.47	0.45
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.35	0.45
22:BA:1431:A:H2'	22:BA:1432:G:C8	2.52	0.45
22:BA:1855:U:C5	22:BA:1856:U:C5	3.05	0.45
22:BA:1930:G:N2	22:BA:1968:G:H2'	2.32	0.45
22:BA:2345:G:H4'	22:BA:2346:A:O5'	2.17	0.45
24:BC:37:ASN:O	24:BC:38:SER:CB	2.64	0.45
24:BC:227:PRO:CA	24:BC:233:GLY:HA2	2.45	0.45
25:BD:13:ARG:HA	25:BD:22:ILE:O	2.17	0.45
25:BD:85:ALA:HB3	25:BD:88:GLU:HG3	1.99	0.45
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.98	0.45
27:BF:63:GLN:NE2	27:BF:90:THR:O	2.50	0.45
27:BF:158:THR:HG22	27:BF:160:ALA:HB3	1.99	0.45
34:BM:17:ASN:O	34:BM:38:ARG:HD3	2.17	0.45
35:BN:101:GLY:C	35:BN:102:PHE:CD1	2.95	0.45
38:BQ:91:ASP:C	38:BQ:91:ASP:OD1	2.59	0.45
42:BU:6:ARG:O	42:BU:9:ASP:HB2	2.17	0.45
50:B2:22:MET:HE2	50:B2:31:LEU:HD12	1.99	0.45
1:CA:33:A:H2'	1:CA:34:C:H6	1.81	0.45
1:CA:73:C:HO2'	1:CA:74:A:P	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:228:A:H4'	16:CP:63:GLN:HG2	1.98	0.45
1:CA:542:G:C2	1:CA:543:U:C5	3.04	0.45
1:CA:708:C:O2'	1:CA:709:U:H5'	2.17	0.45
1:CA:1052:U:H5"	1:CA:1053:G:OP2	2.16	0.45
1:CA:1096:C:C2	1:CA:1097:C:C5	3.05	0.45
1:CA:1255:G:N1	1:CA:1279:G:C8	2.85	0.45
2:CB:142:GLU:O	2:CB:146:ASN:CG	2.60	0.45
6:CF:41:ASP:OD1	6:CF:41:ASP:C	2.60	0.45
7:CG:11:LYS:N	7:CG:11:LYS:CD	2.80	0.45
8:CH:67:GLN:C	8:CH:69:LYS:H	2.24	0.45
22:DA:78:U:H2'	22:DA:79:C:O4'	2.17	0.45
22:DA:195:A:C5	22:DA:198:C:C5	3.05	0.45
22:DA:1262:A:N3	48:D0:7:LYS:NZ	2.65	0.45
22:DA:1342:A:C6	22:DA:1397:U:C5	3.05	0.45
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.52	0.45
22:DA:1644:C:O2	22:DA:1644:C:H2'	2.17	0.45
22:DA:1651:G:C2	22:DA:2007:U:C2	3.04	0.45
22:DA:2208:C:O2	22:DA:2217:G:C2	2.70	0.45
24:DC:240:PHE:CE1	24:DC:242:LYS:O	2.69	0.45
25:DD:186:LEU:HD21	37:DP:4:ILE:CG2	2.47	0.45
27:DF:38:MET:HG3	27:DF:152:LEU:HB3	1.99	0.45
27:DF:60:ILE:HG23	27:DF:138:PHE:CE2	2.52	0.45
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.32	0.45
34:DM:97:GLN:OE1	34:DM:97:GLN:N	2.50	0.45
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.98	0.45
45:DX:10:LYS:HE3	45:DX:54:LYS:HD2	1.99	0.45
46:DY:28:LEU:CD2	46:DY:37:LEU:HD11	2.46	0.45
1:AA:559:A:H4'	1:AA:560:A:O5'	2.17	0.44
1:AA:563:A:C8	1:AA:567:G:O4'	2.70	0.44
1:AA:614:C:H2'	1:AA:615:G:O4'	2.18	0.44
1:AA:736:C:H2'	1:AA:737:C:H6	1.81	0.44
1:AA:737:C:C2	1:AA:738:C:C5	3.04	0.44
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.64	0.44
1:AA:1089:G:C2'	1:AA:1090:U:H5'	2.48	0.44
1:AA:1144:G:H5"	1:AA:1145:A:OP2	2.17	0.44
1:AA:1147:C:O2	9:AI:18:ARG:NH1	2.50	0.44
3:AC:149:ILE:HG13	3:AC:201:TRP:O	2.18	0.44
7:AG:68:ASN:OD1	7:AG:130:ASN:HB3	2.18	0.44
7:AG:146:GLU:O	7:AG:149:LYS:HB3	2.17	0.44
8:AH:111:MET:SD	8:AH:116:ALA:HA	2.56	0.44
13:AM:16:VAL:HG13	13:AM:41:GLU:CB	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:67:ILE:CG2	16:AP:71:VAL:HG12	2.47	0.44
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.77	0.44
22:BA:360:U:C4	22:BA:361:G:O6	2.70	0.44
22:BA:389:G:C8	22:BA:2413:G:H4'	2.52	0.44
22:BA:983:A:C6	22:BA:984:A:C2	3.05	0.44
22:BA:1310:G:N7	22:BA:1311:G:C5	2.85	0.44
22:BA:1799:G:O6	24:BC:178:SER:HB3	2.17	0.44
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.52	0.44
22:BA:2266:A:H4'	22:BA:2267:A:O5'	2.17	0.44
22:BA:2392:A:C2	33:BL:55:MET:HE3	2.52	0.44
22:BA:2595:G:C6	22:BA:2599:G:O6	2.70	0.44
24:BC:24:LEU:HA	24:BC:24:LEU:HD12	1.74	0.44
24:BC:36:LYS:O	24:BC:37:ASN:HB2	2.17	0.44
27:BF:142:ASP:OD2	27:BF:145:LYS:HG2	2.17	0.44
34:BM:105:MET:CG	34:BM:106:ASP:N	2.80	0.44
35:BN:59:SER:O	35:BN:60:VAL:C	2.61	0.44
35:BN:73:ASN:O	35:BN:74:GLU:C	2.60	0.44
36:BO:3:LYS:O	36:BO:6:ALA:HB3	2.17	0.44
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.82	0.44
41:BT:51:PHE:O	41:BT:53:VAL:HG13	2.17	0.44
42:BU:89:ASP:CG	42:BU:90:GLY:H	2.24	0.44
45:BX:11:ARG:HB2	45:BX:12:PRO:HD2	1.98	0.44
47:BZ:8:THR:HG23	47:BZ:34:HIS:O	2.17	0.44
1:CA:951:G:N3	1:CA:970:C:O2'	2.45	0.44
1:CA:1416:G:C2	1:CA:1485:U:O2	2.70	0.44
2:CB:24:ASN:O	2:CB:26:LYS:N	2.51	0.44
2:CB:68:LEU:HD23	2:CB:91:PHE:HA	1.99	0.44
2:CB:200:ILE:O	2:CB:200:ILE:HG22	2.17	0.44
3:CC:111:LEU:HD21	3:CC:144:LEU:HB2	1.99	0.44
3:CC:130:PHE:CD1	3:CC:157:LEU:HD23	2.52	0.44
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.16	0.44
5:CE:82:GLN:OE1	5:CE:149:SER:HA	2.17	0.44
5:CE:150:PRO:O	5:CE:153:VAL:HG22	2.18	0.44
7:CG:92:ARG:HB3	7:CG:93:PRO:HD2	1.99	0.44
11:CK:71:ALA:O	11:CK:75:LYS:HG3	2.16	0.44
13:CM:64:VAL:HG13	13:CM:68:ASP:OD2	2.17	0.44
17:CQ:52:GLU:CG	17:CQ:75:LEU:HD21	2.48	0.44
20:CT:3:ASN:O	20:CT:4:ILE:C	2.60	0.44
21:CU:12:PHE:CD1	21:CU:13:ASP:N	2.85	0.44
22:DA:228:C:H4'	22:DA:229:C:C5'	2.47	0.44
22:DA:563:A:C2	22:DA:2018:G:N3	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1566:A:C6	24:DC:213:TRP:CE3	3.05	0.44
22:DA:1648:U:H2'	22:DA:1649:G:O4'	2.17	0.44
22:DA:1667:G:N2	22:DA:1992:G:OP2	2.43	0.44
22:DA:1717:A:H2'	22:DA:1718:G:O4'	2.17	0.44
22:DA:2164:C:H2'	22:DA:2165:C:H6	1.79	0.44
22:DA:2504:U:C4	55:DA:3001:VIR:C16	2.99	0.44
55:DA:3001:VIR:N9	55:DA:3001:VIR:HC42	2.32	0.44
25:DD:142:VAL:HB	25:DD:143:PRO:CD	2.46	0.44
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.17	0.44
27:DF:18:THR:O	27:DF:19:GLU:HG3	2.17	0.44
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.57	0.44
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.44
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.99	0.44
33:DL:2:ARG:HB3	33:DL:5:THR:OG1	2.17	0.44
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.99	0.44
34:DM:33:LEU:HB2	34:DM:117:PHE:CD2	2.52	0.44
35:DN:69:ARG:O	35:DN:70:THR:HG23	2.17	0.44
35:DN:117:ASP:O	35:DN:118:ARG:CG	2.65	0.44
38:DQ:8:VAL:HG12	38:DQ:9:ILE:N	2.33	0.44
41:DT:12:ARG:O	41:DT:13:ALA:CB	2.64	0.44
46:DY:28:LEU:HD12	46:DY:46:VAL:HG21	1.98	0.44
46:DY:45:GLN:O	46:DY:46:VAL:C	2.61	0.44
46:DY:45:GLN:O	46:DY:48:ARG:N	2.50	0.44
1:AA:105:G:N2	1:AA:379:C:O3'	2.51	0.44
1:AA:207:C:H2'	1:AA:208:U:C2	2.52	0.44
1:AA:551:U:C2'	1:AA:552:U:O5'	2.65	0.44
1:AA:735:C:H2'	1:AA:736:C:C6	2.52	0.44
1:AA:946:A:H2'	1:AA:947:G:C8	2.52	0.44
1:AA:979:C:C6	1:AA:1318:A:N1	2.85	0.44
1:AA:1024:G:H2'	1:AA:1025:U:O5'	2.17	0.44
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.17	0.44
1:AA:1157:A:C6	1:AA:1180:A:C5	3.06	0.44
1:AA:1307:U:N3	1:AA:1308:U:C5	2.85	0.44
1:AA:1319:A:C5	1:AA:1323:G:C4	3.05	0.44
2:AB:133:GLU:HG3	2:AB:137:ARG:HG3	1.99	0.44
3:AC:68:ILE:HD11	3:AC:101:ILE:HD11	1.99	0.44
5:AE:79:GLY:O	5:AE:121:HIS:N	2.45	0.44
10:AJ:48:ARG:CD	14:AN:101:TRP:CZ3	3.00	0.44
22:BA:740:C:O2	22:BA:740:C:H2'	2.17	0.44
22:BA:1108:U:H2'	22:BA:1109:C:O4'	2.17	0.44
22:BA:1288:G:C4	22:BA:1327:A:C2	3.04	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1377:G:OP2	57:BA:3398:HOH:O	2.21	0.44
22:BA:1429:G:H2'	22:BA:1430:G:H8	1.82	0.44
22:BA:1467:U:C4	22:BA:1546:G:N2	2.85	0.44
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.17	0.44
22:BA:1878:G:H2'	22:BA:1879:C:O4'	2.17	0.44
22:BA:2190:G:OP2	22:BA:2190:G:H8	2.00	0.44
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.52	0.44
22:BA:2310:C:H2'	22:BA:2311:A:C5'	2.46	0.44
24:BC:142:HIS:O	24:BC:143:ASN:HB3	2.17	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
29:BH:75:LEU:C	29:BH:75:LEU:HD22	2.41	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
31:BJ:64:VAL:CG1	31:BJ:68:LYS:HB2	2.47	0.44
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.99	0.44
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.99	0.44
53:B5:131:ILE:HA	53:B5:135:ARG:CB	2.47	0.44
1:CA:33:A:H2'	1:CA:34:C:C6	2.52	0.44
1:CA:237:G:C4	1:CA:238:A:C8	3.05	0.44
1:CA:376:G:H5'	16:CP:5:ARG:HB2	1.99	0.44
1:CA:435:A:C2'	1:CA:436:C:O5'	2.66	0.44
1:CA:517:G:C5'	1:CA:519:C:C2	2.99	0.44
1:CA:582:C:N3	1:CA:760:G:C6	2.85	0.44
1:CA:1158:C:N3	1:CA:1160:G:C8	2.85	0.44
1:CA:1302:C:C4	13:CM:17:ILE:HD13	2.52	0.44
2:CB:20:THR:O	2:CB:21:ARG:CZ	2.65	0.44
5:CE:81:LEU:N	5:CE:81:LEU:CD1	2.80	0.44
5:CE:156:LYS:CD	8:CH:71:VAL:HG13	2.47	0.44
9:CI:57:MET:O	9:CI:59:GLU:N	2.51	0.44
10:CJ:18:ILE:HG23	10:CJ:19:ASP:N	2.32	0.44
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	2.00	0.44
11:CK:127:ARG:N	21:CU:34:ARG:NH2	2.65	0.44
12:CL:58:THR:HG23	12:CL:59:ASN:N	2.32	0.44
19:CS:36:ARG:NH2	19:CS:75:ALA:O	2.50	0.44
20:CT:62:ALA:HA	20:CT:67:ILE:HG22	1.99	0.44
22:DA:79:C:O2'	22:DA:346:A:N3	2.34	0.44
22:DA:128:C:H2'	22:DA:129:C:C6	2.52	0.44
22:DA:482:A:N6	22:DA:506:G:O2'	2.51	0.44
22:DA:655:A:H4'	22:DA:656:G:H5'	2.00	0.44
22:DA:815:C:H2'	22:DA:816:C:C6	2.53	0.44
22:DA:846:U:O2'	22:DA:847:U:C5'	2.66	0.44
22:DA:906:U:H2'	22:DA:907:G:O5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:963:U:H2'	22:DA:964:C:C6	2.52	0.44
22:DA:1083:U:O2	22:DA:1086:A:N1	2.50	0.44
22:DA:1275:A:O4'	35:DN:16:HIS:CE1	2.70	0.44
22:DA:1343:G:C5	22:DA:1344:U:O4	2.70	0.44
22:DA:1355:G:C6	22:DA:1377:G:C2	3.05	0.44
22:DA:1678:A:C5	22:DA:1679:A:C8	3.05	0.44
22:DA:1779:U:C5	22:DA:1784:A:N7	2.82	0.44
22:DA:2186:G:C6	22:DA:2187:U:C4	3.04	0.44
22:DA:2234:G:C6	22:DA:2235:G:N7	2.86	0.44
22:DA:2283:C:C4	22:DA:2389:G:C4	3.06	0.44
22:DA:2305:U:C4	27:DF:152:LEU:HA	2.53	0.44
22:DA:2547:A:C8	22:DA:2566:A:C8	3.05	0.44
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.46	0.44
22:DA:2868:A:C6	22:DA:2869:G:C5	3.04	0.44
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.32	0.44
28:DG:158:LYS:C	28:DG:160:LYS:N	2.74	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.58	0.44
32:DK:12:ASP:OD2	32:DK:85:VAL:HG13	2.18	0.44
41:DT:39:THR:C	41:DT:41:ALA:N	2.74	0.44
42:DU:71:ALA:HB1	42:DU:81:ASP:O	2.18	0.44
43:DV:63:ILE:HG13	43:DV:72:VAL:HG22	1.99	0.44
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.15	0.44
47:DZ:6:LYS:HE2	47:DZ:58:GLU:OE2	2.16	0.44
51:D3:31:HIS:CE1	51:D3:32:ILE:CD1	3.00	0.44
1:AA:209:U:C4'	1:AA:210:C:OP2	2.65	0.44
1:AA:557:G:C5	1:AA:558:G:C6	3.05	0.44
1:AA:860:A:C5'	1:AA:861:G:OP2	2.66	0.44
1:AA:872:A:C8	1:AA:874:G:C8	3.05	0.44
1:AA:1110:A:N6	1:AA:1111:A:C6	2.85	0.44
1:AA:1419:G:C5	1:AA:1420:U:C5	3.06	0.44
2:AB:210:VAL:O	2:AB:212:LEU:N	2.50	0.44
3:AC:11:ARG:O	3:AC:12:LEU:C	2.60	0.44
3:AC:89:LYS:HG2	3:AC:90:VAL:N	2.32	0.44
3:AC:159:GLY:O	3:AC:160:ALA:C	2.60	0.44
4:AD:167:LYS:O	4:AD:168:PRO:O	2.35	0.44
6:AF:93:LYS:O	6:AF:94:HIS:HB2	2.18	0.44
8:AH:96:MET:O	8:AH:97:ALA:HB3	2.16	0.44
9:AI:99:ARG:HA	9:AI:104:VAL:HG22	1.99	0.44
15:AO:57:LEU:O	15:AO:60:VAL:N	2.50	0.44
16:AP:46:LYS:CD	16:AP:47:GLU:H	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:250:G:H2'	22:BA:251:A:C8	2.53	0.44
22:BA:603:A:C8	22:BA:655:A:C6	3.05	0.44
22:BA:756:A:H2'	22:BA:757:G:O4'	2.17	0.44
22:BA:831:G:C6	22:BA:832:U:C4	3.05	0.44
22:BA:1070:A:C2'	22:BA:1097:U:OP1	2.65	0.44
22:BA:1171:G:N2	22:BA:1178:C:O2	2.48	0.44
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.44	0.44
22:BA:2553:G:H5"	22:BA:2554:U:OP2	2.17	0.44
27:BF:5:HIS:O	27:BF:6:ASP:C	2.59	0.44
27:BF:175:PHE:HD2	27:BF:177:PHE:CE2	2.35	0.44
33:BL:100:ILE:HD12	33:BL:100:ILE:O	2.17	0.44
34:BM:42:THR:O	34:BM:43:ALA:C	2.59	0.44
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	2.17	0.44
35:BN:58:ASP:CG	35:BN:63:ARG:HH22	2.25	0.44
49:B1:35:GLU:CG	49:B1:50:LYS:HG3	2.48	0.44
53:B5:21:TYR:O	53:B5:22:THR:HG23	2.17	0.44
1:CA:754:C:OP1	15:CO:72:ARG:NH2	2.50	0.44
1:CA:1072:G:C6	1:CA:1073:U:O4	2.70	0.44
2:CB:24:ASN:C	2:CB:26:LYS:N	2.75	0.44
3:CC:172:ARG:C	3:CC:174:PRO:HD3	2.43	0.44
4:CD:173:VAL:O	4:CD:174:ASP:CB	2.65	0.44
7:CG:11:LYS:O	7:CG:12:ILE:C	2.60	0.44
8:CH:112:THR:HG23	8:CH:115:ALA:HB2	1.99	0.44
9:CI:129:LYS:O	9:CI:130:ARG:CD	2.65	0.44
11:CK:63:ALA:O	11:CK:66:ALA:N	2.50	0.44
11:CK:77:TYR:CD1	11:CK:77:TYR:N	2.85	0.44
22:DA:117:G:N1	22:DA:119:A:N6	2.65	0.44
22:DA:126:A:OP2	50:D2:19:ARG:HG3	2.17	0.44
22:DA:662:G:O3'	33:DL:16:GLY:HA2	2.18	0.44
22:DA:1036:G:C6	22:DA:1120:G:C5	3.05	0.44
22:DA:1121:C:N3	22:DA:1122:G:C8	2.86	0.44
22:DA:1364:G:N7	45:DX:2:SER:N	2.66	0.44
22:DA:1464:G:N1	22:DA:1465:G:C5	2.85	0.44
22:DA:1473:G:C2	22:DA:1519:G:N3	2.85	0.44
22:DA:2127:G:N3	22:DA:2162:G:N7	2.65	0.44
22:DA:2250:G:O5'	22:DA:2250:G:C8	2.70	0.44
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.66	0.44
22:DA:2814:A:C6	22:DA:2815:C:C4	3.05	0.44
23:DB:42:C:C6	27:DF:66:LEU:HD22	2.52	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:76:GLU:HG3	33:DL:76:GLU:O	2.16	0.44
33:DL:81:ASP:HA	33:DL:84:LYS:NZ	2.32	0.44
36:DO:31:THR:O	36:DO:32:PRO:C	2.60	0.44
36:DO:67:ASN:OD1	36:DO:69:ASP:N	2.49	0.44
37:DP:28:VAL:HG12	37:DP:30:VAL:HG23	2.00	0.44
40:DS:4:ILE:HG12	40:DS:106:VAL:HG22	1.99	0.44
47:DZ:24:LEU:HD11	47:DZ:54:MET:CE	2.47	0.44
1:AA:44:A:C2	1:AA:399:G:C2	3.05	0.44
1:AA:61:G:OP2	20:AT:5:LYS:HE3	2.17	0.44
1:AA:186:C:H2'	1:AA:187:G:O4'	2.17	0.44
1:AA:257:G:N2	1:AA:258:G:C4	2.86	0.44
1:AA:425:G:O2'	1:AA:426:U:H5'	2.17	0.44
1:AA:592:G:C6	1:AA:648:A:C6	3.04	0.44
1:AA:683:G:N2	11:AK:40:ASN:HA	2.33	0.44
1:AA:685:G:C2	1:AA:686:U:C4	3.06	0.44
1:AA:1268:G:C6	1:AA:1269:A:N6	2.86	0.44
1:AA:1517:G:H1'	22:BA:1919:A:O3'	2.16	0.44
2:AB:208:ARG:O	2:AB:209:ALA:C	2.60	0.44
6:AF:98:GLU:HG2	6:AF:99:ALA:N	2.32	0.44
9:AI:80:ARG:HD2	9:AI:80:ARG:O	2.18	0.44
14:AN:51:LEU:HB3	14:AN:52:PRO:HD2	1.99	0.44
18:AR:28:THR:O	18:AR:31:ASN:OD1	2.36	0.44
22:BA:142:A:O2'	22:BA:143:C:H5'	2.17	0.44
22:BA:340:A:H2'	22:BA:341:C:C5'	2.48	0.44
22:BA:417:C:H2'	22:BA:418:C:C6	2.51	0.44
22:BA:513:A:O2'	22:BA:514:A:H5'	2.18	0.44
22:BA:666:A:H4'	33:BL:48:ARG:HD3	1.99	0.44
22:BA:1128:G:O4'	22:BA:2516:A:O2'	2.35	0.44
22:BA:1965:C:OP1	22:BA:1966:A:O2'	2.36	0.44
22:BA:2131:U:OP1	22:BA:2132:U:H3'	2.17	0.44
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.53	0.44
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.83	0.44
24:BC:19:VAL:O	24:BC:19:VAL:HG12	2.16	0.44
24:BC:84:ASP:OD2	24:BC:87:ARG:NE	2.45	0.44
25:BD:186:LEU:HD11	37:BP:8:LEU:HD11	1.99	0.44
26:BE:32:VAL:HG23	26:BE:33:VAL:N	2.33	0.44
27:BF:31:VAL:O	27:BF:31:VAL:CG2	2.65	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:O	2.17	0.44
30:BI:47:ASP:HA	30:BI:51:LYS:HD2	2.00	0.44
32:BK:35:VAL:HG12	32:BK:36:GLY:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:71:ARG:HH21	35:BN:71:ARG:CG	2.30	0.44
36:BO:24:THR:HG22	36:BO:42:PRO:HG3	1.99	0.44
36:BO:52:SER:O	36:BO:55:GLU:HG2	2.16	0.44
38:BQ:89:GLU:H	39:BR:49:ILE:HD11	1.83	0.44
39:BR:25:LEU:N	39:BR:94:THR:HG23	2.32	0.44
40:BS:19:LEU:HB3	48:B0:22:LEU:HD11	1.99	0.44
47:BZ:33:GLY:O	47:BZ:34:HIS:C	2.60	0.44
49:B1:4:GLY:O	49:B1:5:ILE:HB	2.17	0.44
53:B5:73:VAL:CG2	53:B5:162:ILE:CB	2.95	0.44
1:CA:102:G:O2'	1:CA:151:A:N3	2.43	0.44
1:CA:206:C:H2'	1:CA:207:C:C4'	2.48	0.44
1:CA:463:U:H3'	1:CA:464:U:C6	2.52	0.44
1:CA:510:A:H5"	1:CA:511:C:P	2.57	0.44
1:CA:939:G:P	7:CG:95:ARG:NH2	2.91	0.44
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.18	0.44
1:CA:1362:A:OP1	1:CA:1362:A:H4'	2.17	0.44
1:CA:1376:U:O2	1:CA:1377:A:C5	2.71	0.44
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.52	0.44
3:CC:13:GLY:C	3:CC:14:ILE:HD13	2.43	0.44
4:CD:26:ARG:CD	4:CD:31:LYS:HE3	2.48	0.44
4:CD:74:ASN:HA	4:CD:77:LYS:HB2	1.98	0.44
10:CJ:52:LEU:HD22	10:CJ:59:LYS:HA	1.98	0.44
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.98	0.44
22:DA:39:G:C5	22:DA:40:U:C5	3.05	0.44
22:DA:129:C:H2'	22:DA:130:C:C6	2.52	0.44
22:DA:188:G:C2	22:DA:209:C:N3	2.86	0.44
22:DA:206:U:C2	22:DA:207:A:C8	3.06	0.44
22:DA:443:A:C8	26:DE:40:ARG:HD3	2.53	0.44
22:DA:477:A:H2'	22:DA:478:A:O5'	2.18	0.44
22:DA:480:A:N3	22:DA:480:A:H2'	2.32	0.44
22:DA:1462:C:N3	22:DA:1463:C:C5	2.85	0.44
22:DA:2074:U:C2	22:DA:2436:G:C2	3.05	0.44
22:DA:2111:U:O2	22:DA:2111:U:O4'	2.35	0.44
22:DA:2148:G:C2	22:DA:2149:U:C4	3.05	0.44
22:DA:2198:A:N3	29:DH:29:PHE:HB2	2.32	0.44
22:DA:2208:C:O2	22:DA:2217:G:N2	2.50	0.44
22:DA:2364:C:OP1	44:DW:55:ARG:HD3	2.18	0.44
22:DA:2665:A:N3	22:DA:2665:A:H2'	2.32	0.44
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.18	0.44
24:DC:51:THR:O	24:DC:54:ILE:HG13	2.17	0.44
25:DD:110:THR:HG22	25:DD:111:GLY:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:85:ILE:HG13	27:DF:85:ILE:O	2.18	0.44
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.98	0.44
34:DM:63:ILE:HD11	34:DM:105:MET:HE2	1.99	0.44
41:DT:37:ASP:O	41:DT:81:LYS:NZ	2.48	0.44
42:DU:96:PHE:CZ	42:DU:103:ILE:HG12	2.53	0.44
1:AA:257:G:C2	1:AA:258:G:C5	3.05	0.44
1:AA:437:U:C4	1:AA:438:U:C5	3.05	0.44
1:AA:724:G:C4	1:AA:725:G:C8	3.06	0.44
1:AA:1225:A:O2'	1:AA:1225:A:N3	2.48	0.44
1:AA:1367:C:C4	1:AA:1368:A:N7	2.85	0.44
1:AA:1461:G:C4	1:AA:1462:C:C6	3.05	0.44
4:AD:33:LYS:O	4:AD:34:ILE:C	2.61	0.44
4:AD:147:GLU:HA	4:AD:150:LYS:HD2	1.98	0.44
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.16	0.44
8:AH:32:LEU:O	8:AH:33:LYS:C	2.60	0.44
13:AM:2:ALA:C	13:AM:9:ILE:HG23	2.42	0.44
15:AO:89:ARG:NH1	22:BA:714:U:C5	2.85	0.44
16:AP:71:VAL:O	16:AP:72:ALA:C	2.59	0.44
17:AQ:13:VAL:CG1	17:AQ:14:SER:N	2.80	0.44
18:AR:22:ASP:OD1	18:AR:24:LYS:HG3	2.18	0.44
22:BA:137:U:H2'	22:BA:140:C:N1	2.33	0.44
22:BA:142:A:H2'	22:BA:143:C:C6	2.53	0.44
22:BA:503:A:C6	22:BA:505:A:C6	3.06	0.44
22:BA:812:C:OP1	38:BQ:13:ARG:NH2	2.51	0.44
22:BA:972:A:OP2	22:BA:973:A:O2'	2.36	0.44
22:BA:996:A:OP2	38:BQ:93:LYS:HD3	2.16	0.44
22:BA:1165:A:H2'	22:BA:1166:G:H8	1.82	0.44
22:BA:1413:A:O2'	22:BA:1414:C:H5'	2.18	0.44
22:BA:1922:G:N1	22:BA:1923:U:C6	2.85	0.44
22:BA:2116:G:O6	22:BA:2171:A:N6	2.49	0.44
25:BD:133:THR:CG2	25:BD:134:HIS:N	2.80	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
29:BH:89:LYS:HD3	1:CA:359:G:OP1	2.17	0.44
30:BI:9:VAL:HG23	30:BI:59:ILE:HG13	1.99	0.44
30:BI:29:GLY:O	30:BI:30:GLN:HG3	2.17	0.44
30:BI:34:ASN:CB	30:BI:37:GLU:HB2	2.48	0.44
32:BK:79:PHE:CD1	37:BP:70:VAL:HG22	2.53	0.44
42:BU:97:LYS:O	42:BU:98:SER:CB	2.66	0.44
44:BW:49:ALA:O	44:BW:50:ASN:HB2	2.17	0.44
48:B0:49:TYR:O	48:B0:50:ARG:HB2	2.16	0.44
1:CA:198:G:O2'	1:CA:199:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.99	0.44
1:CA:490:C:H2'	1:CA:491:G:C8	2.52	0.44
1:CA:604:G:C5	1:CA:605:U:C4	3.06	0.44
1:CA:983:A:N3	1:CA:983:A:C2'	2.80	0.44
1:CA:1093:A:C4	1:CA:1095:U:O4'	2.71	0.44
1:CA:1431:A:C5	1:CA:1432:G:C6	3.04	0.44
1:CA:1450:U:O2'	1:CA:1451:U:H2'	2.16	0.44
2:CB:10:LEU:HD21	2:CB:12:ALA:O	2.16	0.44
5:CE:122:ASN:CG	5:CE:123:VAL:N	2.75	0.44
8:CH:95:VAL:O	8:CH:96:MET:C	2.60	0.44
9:CI:13:LYS:O	9:CI:14:SER:CB	2.66	0.44
9:CI:22:LYS:O	9:CI:24:GLY:N	2.50	0.44
11:CK:72:ASP:OD2	11:CK:73:ALA:N	2.50	0.44
11:CK:82:LEU:HD23	11:CK:82:LEU:O	2.18	0.44
14:CN:54:ASP:OD1	14:CN:59:ARG:NH1	2.51	0.44
14:CN:65:ARG:HB2	14:CN:78:GLY:O	2.17	0.44
22:DA:144:A:H2'	22:DA:144:A:N3	2.32	0.44
22:DA:188:G:O2'	22:DA:1365:A:N6	2.50	0.44
22:DA:190:A:C6	22:DA:191:A:C2	3.06	0.44
22:DA:193:U:C4	22:DA:194:G:N7	2.86	0.44
22:DA:777:G:N7	22:DA:793:A:C2	2.83	0.44
22:DA:777:G:N2	22:DA:778:G:N9	2.66	0.44
22:DA:973:A:H5"	39:DR:81:LYS:HG3	1.99	0.44
22:DA:1097:U:C2'	30:DI:9:VAL:HG11	2.47	0.44
22:DA:1169:A:N1	22:DA:1180:U:O4	2.50	0.44
22:DA:1290:C:C2	22:DA:1291:C:C6	3.05	0.44
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.18	0.44
22:DA:1584:U:O2	22:DA:1584:U:C2'	2.65	0.44
22:DA:1669:A:O4'	32:DK:5:GLN:HG3	2.18	0.44
22:DA:1726:C:H2'	22:DA:1727:C:C6	2.51	0.44
22:DA:1926:U:C2'	22:DA:1928:A:N7	2.81	0.44
22:DA:1949:G:C6	22:DA:1950:G:C6	3.05	0.44
22:DA:2111:U:C4	22:DA:2147:A:C2	3.05	0.44
22:DA:2373:G:C6	22:DA:2374:C:C4	3.06	0.44
22:DA:2474:U:O2	22:DA:2474:U:H2'	2.17	0.44
22:DA:2549:G:C2	22:DA:2560:A:C2	3.06	0.44
22:DA:2688:G:C8	22:DA:2719:G:C6	3.06	0.44
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.17	0.44
22:DA:2842:G:C6	22:DA:2876:G:N1	2.85	0.44
24:DC:246:THR:C	24:DC:248:TRP:H	2.25	0.44
25:DD:122:VAL:HG21	25:DD:141:ARG:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:20:PRO:HG2	30:DI:24:VAL:CG2	2.47	0.44
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	2.00	0.44
31:DJ:25:LEU:CD1	31:DJ:100:VAL:HG12	2.47	0.44
35:DN:13:ASN:O	35:DN:16:HIS:N	2.47	0.44
38:DQ:61:TRP:CD2	38:DQ:93:LYS:HA	2.53	0.44
45:DX:54:LYS:HA	45:DX:57:ARG:HB2	1.99	0.44
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.18	0.44
1:AA:109:A:C4	1:AA:327:A:C2	3.05	0.44
1:AA:174:A:C4	1:AA:175:C:C6	3.06	0.44
1:AA:554:A:H2'	1:AA:555:U:C6	2.53	0.44
1:AA:731:G:O2'	1:AA:732:C:H5'	2.18	0.44
1:AA:747:A:C5'	1:AA:748:G:OP2	2.66	0.44
1:AA:827:U:C4	1:AA:870:U:C2	3.06	0.44
1:AA:1027:C:N3	1:AA:1034:G:O6	2.51	0.44
1:AA:1210:C:C4	1:AA:1211:U:C4	3.06	0.44
1:AA:1313:U:C4	1:AA:1314:C:N4	2.86	0.44
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.53	0.44
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.99	0.44
3:AC:6:HIS:CD2	3:AC:7:PRO:CD	3.01	0.44
3:AC:64:ILE:HG12	3:AC:66:VAL:HG23	1.99	0.44
4:AD:3:ARG:NE	4:AD:115:ARG:HD3	2.31	0.44
4:AD:28:ILE:O	4:AD:29:ASP:C	2.61	0.44
4:AD:122:ALA:O	4:AD:123:ILE:CG2	2.65	0.44
6:AF:51:ILE:O	6:AF:52:ASN:CB	2.65	0.44
8:AH:7:ILE:O	8:AH:11:LEU:HG	2.18	0.44
8:AH:50:LYS:O	8:AH:60:GLU:N	2.51	0.44
11:AK:23:ILE:HD11	11:AK:86:VAL:HG13	1.99	0.44
13:AM:73:ILE:O	13:AM:77:ILE:HG13	2.17	0.44
16:AP:52:LEU:O	16:AP:54:LEU:N	2.51	0.44
22:BA:301:G:P	42:BU:82:ARG:NH1	2.91	0.44
22:BA:500:G:N1	22:BA:503:A:OP2	2.50	0.44
22:BA:620:G:H4'	22:BA:621:A:O5'	2.17	0.44
22:BA:669:G:N2	22:BA:670:A:C2	2.85	0.44
22:BA:962:G:O2'	22:BA:963:U:H5'	2.18	0.44
22:BA:1088:A:N3	22:BA:1088:A:H5"	2.31	0.44
22:BA:1495:A:O2'	22:BA:1496:A:H5'	2.18	0.44
22:BA:1907:G:C5	22:BA:1908:C:C4	3.05	0.44
22:BA:1949:G:N2	22:BA:1958:C:C2	2.85	0.44
22:BA:2018:G:H2'	22:BA:2019:A:H8	1.82	0.44
22:BA:2058:A:N6	57:BA:3488:HOH:O	2.50	0.44
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:108:LYS:HD2	24:BC:194:GLU:OE1	2.17	0.44
26:BE:44:ARG:HG2	26:BE:45:ALA:N	2.27	0.44
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.18	0.44
28:BG:121:ILE:HD11	28:BG:140:VAL:HG12	2.00	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
32:BK:92:GLU:HG3	32:BK:111:LYS:HZ3	1.83	0.44
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.32	0.44
36:BO:18:LEU:HD11	36:BO:91:SER:HB3	1.98	0.44
40:BS:8:ARG:HB3	40:BS:102:HIS:ND1	2.33	0.44
41:BT:11:LEU:N	41:BT:11:LEU:HD23	2.32	0.44
43:BV:10:LYS:H	43:BV:10:LYS:NZ	2.16	0.44
44:BW:37:ILE:HG21	44:BW:80:ILE:HG21	1.99	0.44
51:B3:31:HIS:CD2	51:B3:32:ILE:HD12	2.52	0.44
1:CA:440:C:H2'	1:CA:441:A:O5'	2.18	0.44
1:CA:676:A:N1	1:CA:677:U:C4	2.86	0.44
1:CA:1000:A:C2	1:CA:1041:G:N2	2.86	0.44
2:CB:27:MET:HE1	2:CB:193:PRO:HB3	2.00	0.44
2:CB:205:ASP:N	2:CB:205:ASP:OD1	2.50	0.44
3:CC:64:ILE:HG23	3:CC:99:ALA:HB2	2.00	0.44
3:CC:184:TYR:CE1	3:CC:201:TRP:CE2	3.06	0.44
4:CD:37:ALA:HA	4:CD:42:GLY:HA3	2.00	0.44
4:CD:102:VAL:HG13	4:CD:107:PHE:HB2	1.99	0.44
5:CE:16:ILE:CD1	5:CE:38:VAL:HG23	2.48	0.44
8:CH:35:ALA:O	8:CH:39:VAL:HG23	2.16	0.44
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	2.00	0.44
12:CL:83:ARG:N	12:CL:96:HIS:O	2.49	0.44
12:CL:108:LYS:O	12:CL:109:ASP:HB2	2.17	0.44
15:CO:19:ALA:O	15:CO:20:ASN:HB2	2.18	0.44
15:CO:62:GLN:O	15:CO:66:LEU:HD23	2.18	0.44
15:CO:67:LEU:HD23	15:CO:78:TYR:CE2	2.52	0.44
20:CT:68:HIS:HB3	20:CT:69:LYS:HG3	1.99	0.44
22:DA:84:A:N1	22:DA:98:G:O2'	2.39	0.44
22:DA:222:A:C8	22:DA:224:U:C6	3.05	0.44
22:DA:305:C:C2	22:DA:313:G:C2	3.06	0.44
22:DA:528:A:N1	22:DA:2042:A:H2'	2.33	0.44
22:DA:1248:G:OP1	38:DQ:2:ALA:HB3	2.18	0.44
22:DA:1341:G:C2	41:DT:84:TYR:CD2	3.06	0.44
22:DA:1436:G:C2	22:DA:1557:C:C2	3.06	0.44
22:DA:1545:A:N7	22:DA:1546:G:C4	2.85	0.44
22:DA:1622:G:C2	22:DA:1623:G:C8	3.06	0.44
22:DA:1773:A:N3	22:DA:1978:A:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.86	0.44
22:DA:1833:C:C4	22:DA:1834:U:C5	3.06	0.44
22:DA:2083:G:N7	22:DA:2084:C:C5	2.86	0.44
22:DA:2138:G:N2	22:DA:2154:A:H1'	2.33	0.44
22:DA:2147:A:H2'	22:DA:2148:G:O4'	2.17	0.44
22:DA:2286:G:C5'	22:DA:2287:A:O4'	2.66	0.44
27:DF:3:LYS:HD3	27:DF:101:GLU:OE2	2.18	0.44
27:DF:55:ALA:HA	27:DF:58:ALA:HB3	1.99	0.44
32:DK:18:ARG:HB2	32:DK:45:GLU:HB3	1.99	0.44
33:DL:53:GLY:O	33:DL:54:GLN:O	2.36	0.44
33:DL:56:PRO:O	33:DL:60:ARG:CB	2.65	0.44
34:DM:57:VAL:O	34:DM:58:LYS:O	2.35	0.44
37:DP:92:VAL:HG13	37:DP:110:ILE:HG22	2.00	0.44
1:AA:102:G:C4	1:AA:103:U:C5	3.06	0.44
1:AA:119:A:C4	1:AA:240:G:N7	2.86	0.44
1:AA:251:G:N1	1:AA:266:G:C6	2.86	0.44
1:AA:462:G:N7	1:AA:463:U:C5	2.86	0.44
1:AA:695:A:C6	1:AA:696:A:C2	3.06	0.44
1:AA:956:U:C2'	1:AA:957:U:H5'	2.47	0.44
1:AA:965:U:H5'	1:AA:969:A:O4'	2.17	0.44
1:AA:1042:A:H2'	1:AA:1043:G:O4'	2.17	0.44
1:AA:1479:C:H2'	1:AA:1480:A:O4'	2.18	0.44
2:AB:27:MET:HE1	2:AB:193:PRO:HB3	1.99	0.44
2:AB:40:ILE:N	2:AB:40:ILE:HD13	2.33	0.44
2:AB:76:ALA:O	2:AB:80:VAL:HG23	2.17	0.44
4:AD:174:ASP:O	4:AD:175:ALA:CB	2.65	0.44
5:AE:41:ASP:OD1	5:AE:43:ASN:N	2.43	0.44
7:AG:125:SER:O	7:AG:128:ALA:HB3	2.17	0.44
8:AH:10:MET:HE2	8:AH:33:LYS:HA	2.00	0.44
9:AI:17:ALA:HB2	9:AI:67:VAL:CG2	2.48	0.44
9:AI:51:PRO:HB2	9:AI:83:ILE:CG2	2.48	0.44
15:AO:45:GLU:O	15:AO:46:HIS:HB2	2.17	0.44
19:AS:24:GLU:O	19:AS:24:GLU:HG3	2.16	0.44
22:BA:1007:C:OP1	31:BJ:37:ARG:NH2	2.51	0.44
22:BA:1169:A:C2	22:BA:1181:U:O2	2.70	0.44
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.71	0.44
22:BA:1588:G:C2	22:BA:1589:U:C5	3.06	0.44
22:BA:1791:A:O2'	24:BC:206:GLY:HA2	2.17	0.44
22:BA:1850:G:C5	22:BA:1851:U:C4	3.06	0.44
22:BA:1996:C:H4'	22:BA:1997:C:OP1	2.17	0.44
22:BA:2173:A:C8	22:BA:2174:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2538:C:H2'	22:BA:2539:C:H6	1.81	0.44
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.53	0.44
27:BF:107:ALA:O	27:BF:110:ARG:N	2.50	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
32:BK:47:ILE:HB	32:BK:48:PRO:CD	2.46	0.44
43:BV:4:ILE:CG1	43:BV:50:MET:HE1	2.48	0.44
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.53	0.44
53:B5:78:ILE:HG22	53:B5:123:ALA:HA	2.00	0.44
1:CA:123:U:O2'	1:CA:290:C:H1'	2.17	0.44
1:CA:154:U:H2'	1:CA:155:A:H5'	2.00	0.44
1:CA:291:U:O2	1:CA:291:U:H2'	2.18	0.44
1:CA:307:C:H5"	1:CA:308:C:OP2	2.17	0.44
1:CA:439:U:H4'	4:CD:121:LYS:CG	2.47	0.44
1:CA:442:G:C6	1:CA:443:C:C4	3.05	0.44
1:CA:842:U:O2	1:CA:845:A:OP1	2.36	0.44
1:CA:878:A:OP1	8:CH:80:ARG:HB3	2.17	0.44
1:CA:1277:C:O2'	1:CA:1279:G:H1'	2.17	0.44
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.53	0.44
1:CA:1540:U:H4'	21:CU:18:ARG:HG2	2.00	0.44
2:CB:167:ASP:CG	2:CB:191:SER:HA	2.43	0.44
2:CB:173:ILE:HG22	2:CB:177:ASN:ND2	2.33	0.44
3:CC:179:ARG:O	3:CC:179:ARG:HD2	2.18	0.44
4:CD:129:VAL:O	4:CD:129:VAL:HG13	2.18	0.44
6:CF:3:HIS:ND1	6:CF:65:GLU:HG3	2.33	0.44
8:CH:114:ARG:O	8:CH:115:ALA:C	2.60	0.44
10:CJ:34:ALA:O	10:CJ:35:GLN:CB	2.66	0.44
10:CJ:91:ASP:O	10:CJ:92:LEU:HG	2.18	0.44
12:CL:65:SER:HB2	12:CL:82:ILE:CD1	2.47	0.44
13:CM:11:ASP:HA	13:CM:45:ILE:HB	1.99	0.44
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	2.00	0.44
16:CP:37:GLY:HA2	16:CP:51:ARG:NH1	2.33	0.44
18:CR:24:LYS:O	18:CR:26:ILE:N	2.51	0.44
22:DA:72:U:C6	46:DY:54:LYS:HD3	2.53	0.44
22:DA:533:G:C5'	38:DQ:24:TYR:CD1	3.01	0.44
22:DA:540:C:O2'	22:DA:541:A:H5'	2.17	0.44
22:DA:562:U:H2'	22:DA:572:A:O4'	2.18	0.44
22:DA:760:G:C6	22:DA:761:A:C5	3.06	0.44
22:DA:1730:C:O2'	22:DA:1731:G:C2	2.66	0.44
22:DA:1865:U:C5	22:DA:1875:G:C2	3.06	0.44
22:DA:2127:G:O2'	22:DA:2173:A:N3	2.51	0.44
22:DA:2253:G:C5	22:DA:2254:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:221:ARG:NH2	57:DC:309:HOH:O	2.50	0.44
25:DD:124:ARG:HA	25:DD:165:MET:CE	2.47	0.44
27:DF:31:VAL:HG11	27:DF:97:TRP:CH2	2.52	0.44
27:DF:122:PHE:CE1	27:DF:166:GLY:CA	3.01	0.44
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.44
31:DJ:105:VAL:HG12	31:DJ:109:LEU:CD1	2.47	0.44
34:DM:31:PHE:CD2	34:DM:113:ALA:HB2	2.53	0.44
37:DP:4:ILE:O	37:DP:8:LEU:HB2	2.17	0.44
41:DT:2:ILE:CG2	41:DT:4:GLU:HG3	2.48	0.44
41:DT:69:ARG:HA	41:DT:74:ILE:HG22	2.00	0.44
45:DX:54:LYS:O	45:DX:55:GLY:C	2.60	0.44
48:D0:28:LEU:HD12	48:D0:28:LEU:N	2.32	0.44
51:D3:15:LYS:HD3	51:D3:23:LYS:HE2	1.99	0.44
1:AA:263:A:P	20:AT:74:ARG:NH1	2.90	0.44
1:AA:457:G:C6	1:AA:458:U:N3	2.86	0.44
1:AA:684:U:C4	1:AA:685:G:C5	3.06	0.44
1:AA:728:A:N6	1:AA:729:A:N6	2.66	0.44
1:AA:770:C:O2'	1:AA:771:G:H5'	2.18	0.44
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.53	0.44
2:AB:21:ARG:O	2:AB:23:TRP:HB3	2.17	0.44
2:AB:101:LEU:HD11	2:AB:158:PRO:HG2	2.00	0.44
4:AD:11:LEU:O	4:AD:12:SER:C	2.60	0.44
5:AE:81:LEU:N	5:AE:81:LEU:CD2	2.81	0.44
6:AF:80:PHE:CD1	6:AF:80:PHE:C	2.95	0.44
7:AG:8:GLY:O	7:AG:9:GLN:HB3	2.18	0.44
11:AK:97:ILE:HG13	11:AK:98:ARG:N	2.30	0.44
11:AK:110:ILE:HB	21:AU:6:VAL:CG2	2.48	0.44
14:AN:13:ARG:NE	14:AN:54:ASP:OD1	2.49	0.44
14:AN:89:MET:HE1	14:AN:98:LYS:HD3	1.99	0.44
15:AO:88:ARG:NH1	15:AO:88:ARG:HB2	2.33	0.44
16:AP:78:VAL:O	16:AP:79:ASN:HB2	2.18	0.44
22:BA:38:A:C2	22:BA:442:G:C2	3.06	0.44
22:BA:204:A:O4'	22:BA:206:U:C6	2.71	0.44
22:BA:528:A:H2	22:BA:2043:C:H5'	1.82	0.44
22:BA:735:A:N7	22:BA:761:A:H2	2.15	0.44
22:BA:995:C:O2	31:BJ:3:THR:OG1	2.27	0.44
22:BA:999:U:C5	22:BA:1154:G:C6	3.05	0.44
22:BA:1206:G:C6	22:BA:1207:C:C4	3.06	0.44
22:BA:1665:A:O2'	32:BK:1:MET:HB3	2.18	0.44
22:BA:1949:G:N2	22:BA:1958:C:O2	2.51	0.44
22:BA:2070:A:H2'	22:BA:2071:A:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2250:G:H8	22:BA:2250:G:O5'	2.01	0.44
22:BA:2574:G:C6	22:BA:2575:C:C4	3.06	0.44
24:BC:257:THR:O	24:BC:258:ARG:C	2.59	0.44
27:BF:64:LYS:HA	27:BF:65:PRO:HD3	1.89	0.44
27:BF:158:THR:CG2	27:BF:160:ALA:HB3	2.47	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
31:BJ:71:ASP:N	31:BJ:71:ASP:OD1	2.51	0.44
32:BK:68:GLY:HA3	32:BK:77:ILE:O	2.18	0.44
33:BL:89:VAL:O	33:BL:94:THR:HG21	2.18	0.44
42:BU:102:THR:CG2	42:BU:103:ILE:N	2.80	0.44
1:CA:115:G:C2	1:CA:289:G:C8	3.05	0.44
1:CA:179:A:H2'	1:CA:180:U:C6	2.53	0.44
1:CA:756:C:O2'	1:CA:757:U:H5'	2.17	0.44
1:CA:815:A:C2	1:CA:1529:G:C4	3.06	0.44
1:CA:1193:G:N2	1:CA:1194:U:C2	2.86	0.44
1:CA:1259:C:N4	1:CA:1260:G:C4	2.85	0.44
3:CC:64:ILE:HG22	3:CC:97:VAL:HG23	2.00	0.44
3:CC:134:MET:SD	3:CC:153:VAL:HG13	2.58	0.44
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.26	0.44
4:CD:89:ASN:O	4:CD:92:ALA:HB3	2.18	0.44
9:CI:55:VAL:O	9:CI:55:VAL:CG2	2.65	0.44
12:CL:38:TYR:HB2	12:CL:52:VAL:CG1	2.47	0.44
15:CO:23:GLY:O	15:CO:24:SER:C	2.60	0.44
17:CQ:14:SER:O	17:CQ:17:MET:HE1	2.18	0.44
21:CU:24:GLU:HG3	21:CU:28:VAL:CG2	2.47	0.44
22:DA:7:G:H2'	22:DA:8:C:O4'	2.18	0.44
22:DA:77:G:H5"	46:DY:2:LYS:HB3	1.99	0.44
22:DA:391:A:C5	22:DA:392:U:C5	3.06	0.44
22:DA:481:G:C2	22:DA:507:A:C4	3.06	0.44
22:DA:483:A:O2'	42:DU:56:GLY:HA3	2.18	0.44
22:DA:503:A:N3	22:DA:506:G:C8	2.86	0.44
22:DA:513:A:N3	22:DA:514:A:C8	2.86	0.44
22:DA:575:A:C2	22:DA:576:U:C5	3.05	0.44
22:DA:674:G:H1'	26:DE:69:ARG:CD	2.48	0.44
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.18	0.44
22:DA:770:G:P	50:D2:11:LYS:HE2	2.57	0.44
22:DA:945:A:C4	22:DA:2448:A:C2	3.06	0.44
22:DA:947:A:H2'	22:DA:948:C:C6	2.53	0.44
22:DA:1276:A:N1	22:DA:1295:C:C2	2.86	0.44
22:DA:1688:U:H1'	22:DA:1701:A:C6	2.53	0.44
22:DA:1744:A:C4	22:DA:1745:A:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1809:A:N6	22:DA:1810:A:C6	2.86	0.44
22:DA:1842:G:O4'	24:DC:243:HIS:NE2	2.51	0.44
22:DA:2198:A:C5	29:DH:29:PHE:HB2	2.53	0.44
22:DA:2874:C:P	57:DA:3801:HOH:O	2.76	0.44
24:DC:212:ARG:NE	24:DC:212:ARG:HA	2.33	0.44
25:DD:92:VAL:CG1	25:DD:93:GLY:N	2.81	0.44
27:DF:8:TYR:O	27:DF:12:VAL:HB	2.18	0.44
32:DK:71:ARG:HB3	32:DK:72:PRO:HD2	2.00	0.44
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	2.32	0.44
37:DP:104:THR:O	37:DP:105:GLY:C	2.61	0.44
40:DS:59:GLU:OE1	40:DS:66:ILE:HD11	2.18	0.44
42:DU:34:VAL:HG13	42:DU:67:VAL:CG2	2.47	0.44
42:DU:38:GLY:HA2	42:DU:41:LEU:HD21	2.00	0.44
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.65	0.44
1:AA:133:U:H1'	1:AA:230:G:N2	2.33	0.44
1:AA:149:A:C1'	1:AA:1446:A:C2	3.01	0.44
1:AA:174:A:C2'	1:AA:175:C:H5'	2.48	0.44
1:AA:198:G:C6	1:AA:199:A:C5	3.06	0.44
1:AA:474:G:C4	1:AA:475:C:C5	3.06	0.44
1:AA:647:C:O2'	1:AA:648:A:H5'	2.17	0.44
1:AA:745:G:O2'	1:AA:746:A:H5'	2.18	0.44
1:AA:983:A:N3	1:AA:983:A:O2'	2.48	0.44
1:AA:1129:C:C2	1:AA:1139:G:C6	3.06	0.44
1:AA:1374:A:C2	1:AA:1375:A:C8	3.06	0.44
1:AA:1494:G:C5	1:AA:1495:U:C5	3.06	0.44
2:AB:111:ILE:O	2:AB:114:LEU:N	2.50	0.44
3:AC:14:ILE:N	3:AC:14:ILE:HD13	2.32	0.44
6:AF:12:PRO:O	6:AF:15:SER:N	2.51	0.44
6:AF:91:ARG:O	6:AF:92:THR:CB	2.66	0.44
7:AG:55:GLY:O	7:AG:56:LYS:C	2.61	0.44
7:AG:145:ALA:O	7:AG:146:GLU:HB3	2.16	0.44
12:AL:81:LEU:HB2	12:AL:102:LEU:HD22	1.99	0.44
13:AM:107:ARG:HH21	13:AM:113:ARG:HB3	1.83	0.44
18:AR:25:ASP:O	18:AR:26:ILE:C	2.61	0.44
19:AS:13:LEU:O	19:AS:15:LEU:N	2.50	0.44
20:AT:58:VAL:O	20:AT:59:ASP:C	2.61	0.44
21:AU:53:VAL:O	21:AU:54:LYS:HB2	2.18	0.44
22:BA:108:G:O2'	22:BA:109:C:H5'	2.17	0.44
22:BA:244:A:H2'	22:BA:245:G:O4'	2.18	0.44
22:BA:422:A:C2	22:BA:423:A:C4	3.06	0.44
22:BA:489:G:O4'	22:BA:1284:A:C8	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:513:A:C2'	22:BA:514:A:H5'	2.48	0.44
22:BA:920:A:H2'	22:BA:921:C:O4'	2.17	0.44
22:BA:1031:G:C4'	52:B4:6:SER:HB2	2.48	0.44
22:BA:1499:C:O2'	22:BA:1500:G:H5'	2.17	0.44
22:BA:1910:G:H2'	22:BA:1911:U:O4'	2.18	0.44
22:BA:2306:C:OP2	22:BA:2307:G:O2'	2.20	0.44
22:BA:2547:A:C2	22:BA:2548:U:N3	2.86	0.44
22:BA:2714:G:C5	22:BA:2715:C:C5	3.06	0.44
22:BA:2856:A:N6	22:BA:2857:G:C6	2.86	0.44
27:BF:134:GLU:O	27:BF:137:ILE:HG23	2.18	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
33:BL:144:GLU:C	33:BL:144:GLU:OE1	2.60	0.44
36:BO:101:GLY:C	36:BO:103:VAL:N	2.75	0.44
41:BT:76:ARG:NH2	41:BT:79:ASP:OD1	2.51	0.44
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.53	0.44
49:B1:25:LYS:HE2	49:B1:30:LYS:O	2.17	0.44
1:CA:84:U:O2'	1:CA:85:U:H5'	2.17	0.44
1:CA:295:C:C4	1:CA:296:U:C5	3.05	0.44
1:CA:518:C:H2'	1:CA:530:G:C8	2.53	0.44
1:CA:820:U:H4'	1:CA:821:G:OP2	2.17	0.44
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.88	0.44
9:CI:40:GLY:O	9:CI:41:ARG:HB2	2.18	0.44
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.43	0.44
18:CR:70:TYR:O	18:CR:71:THR:O	2.36	0.44
22:DA:167:A:C2	22:DA:168:G:H1'	2.52	0.44
22:DA:199:A:N6	22:DA:2434:A:C5	2.86	0.44
22:DA:523:C:H2'	22:DA:524:G:C8	2.53	0.44
22:DA:1067:A:O5'	22:DA:1068:G:OP2	2.36	0.44
22:DA:1599:U:C4	22:DA:1600:C:N4	2.85	0.44
22:DA:1866:A:C8	22:DA:1867:G:C8	3.05	0.44
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.18	0.44
22:DA:2040:G:H2'	22:DA:2041:U:O4'	2.17	0.44
22:DA:2109:U:H5"	22:DA:2110:G:OP2	2.17	0.44
22:DA:2371:G:C2	22:DA:2372:U:C6	3.05	0.44
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.17	0.44
24:DC:145:GLU:HA	24:DC:152:GLY:HA2	1.99	0.44
26:DE:23:PHE:CG	26:DE:111:GLU:HG3	2.53	0.44
26:DE:149:ILE:CD1	26:DE:172:ALA:HA	2.47	0.44
26:DE:152:GLU:O	26:DE:154:ASP:N	2.51	0.44
29:DH:29:PHE:O	29:DH:30:LEU:C	2.61	0.44
30:DI:20:PRO:HG2	30:DI:24:VAL:HG23	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:75:PRO:HG2	30:DI:78:VAL:CG2	2.47	0.44
30:DI:123:GLU:HG3	30:DI:123:GLU:O	2.18	0.44
34:DM:36:VAL:HG13	43:DV:82:TYR:CD2	2.53	0.44
34:DM:58:LYS:C	34:DM:60:GLN:H	2.26	0.44
35:DN:1:MET:CE	35:DN:1:MET:H3	2.30	0.44
37:DP:21:ARG:HB3	37:DP:22:PRO:HD2	2.00	0.44
37:DP:39:ARG:HG3	37:DP:40:LEU:H	1.83	0.44
37:DP:55:LEU:HA	37:DP:77:HIS:CD2	2.53	0.44
38:DQ:50:ARG:O	38:DQ:54:LYS:HE3	2.18	0.44
42:DU:53:ASN:O	42:DU:53:ASN:ND2	2.51	0.44
49:D1:4:GLY:C	49:D1:6:ARG:N	2.76	0.44
1:AA:148:G:H2'	1:AA:149:A:O5'	2.17	0.43
1:AA:173:U:C5	1:AA:197:A:C2	3.06	0.43
1:AA:858:G:O2'	1:AA:859:G:H5'	2.18	0.43
1:AA:877:G:N2	8:AH:2:SER:N	2.66	0.43
1:AA:1072:G:C5	1:AA:1073:U:C4	3.06	0.43
1:AA:1182:G:C4'	1:AA:1183:U:H5'	2.48	0.43
1:AA:1306:A:C5	1:AA:1332:A:C2	3.06	0.43
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.52	0.43
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.82	0.43
1:AA:1463:U:C2	1:AA:1464:U:C5	3.06	0.43
2:AB:70:VAL:O	2:AB:70:VAL:HG13	2.18	0.43
9:AI:42:GLU:O	9:AI:45:ARG:NH1	2.51	0.43
11:AK:13:ARG:HG3	11:AK:77:TYR:HE1	1.82	0.43
13:AM:48:LEU:HD22	13:AM:53:ILE:CG1	2.47	0.43
15:AO:46:HIS:C	15:AO:48:LYS:H	2.24	0.43
15:AO:81:LEU:HD11	15:AO:85:LEU:HD23	2.00	0.43
17:AQ:75:LEU:C	17:AQ:75:LEU:HD12	2.43	0.43
19:AS:15:LEU:HB2	19:AS:33:THR:HG21	2.00	0.43
20:AT:35:VAL:CG1	20:AT:79:LEU:HD22	2.48	0.43
22:BA:103:A:H2'	22:BA:104:A:O4'	2.18	0.43
22:BA:108:G:C2'	22:BA:109:C:H5'	2.47	0.43
22:BA:414:C:H5"	22:BA:1879:C:O2'	2.18	0.43
22:BA:1180:U:C2'	22:BA:1181:U:C5'	2.96	0.43
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.52	0.43
22:BA:1747:U:O2'	22:BA:1748:C:H5'	2.17	0.43
22:BA:2302:U:O2'	22:BA:2303:G:H5'	2.18	0.43
22:BA:2507:C:H5"	22:BA:2573:C:N4	2.33	0.43
22:BA:2536:G:C6	22:BA:2537:U:C4	3.06	0.43
22:BA:2673:G:C2	22:BA:2674:G:C8	3.06	0.43
22:BA:2740:A:C6	22:BA:2741:A:C6	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2865:U:C4	22:BA:2866:U:C4	3.06	0.43
25:BD:13:ARG:NH2	25:BD:15:PHE:CZ	2.87	0.43
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.99	0.43
30:BI:42:PHE:C	30:BI:42:PHE:CD2	2.96	0.43
33:BL:116:VAL:HG13	33:BL:116:VAL:O	2.18	0.43
41:BT:7:LEU:HD22	41:BT:46:ALA:HB2	2.00	0.43
1:CA:4:U:O2	1:CA:4:U:C2'	2.66	0.43
1:CA:179:A:C5	1:CA:180:U:C4	3.06	0.43
1:CA:188:C:N4	1:CA:189:A:C6	2.86	0.43
1:CA:426:U:OP1	4:CD:33:LYS:HE3	2.18	0.43
1:CA:499:A:H4'	1:CA:500:G:OP1	2.18	0.43
1:CA:772:U:O2'	1:CA:773:G:H5'	2.18	0.43
1:CA:781:A:H4'	1:CA:1522:U:O2'	2.18	0.43
1:CA:790:A:C5	1:CA:791:G:C5	3.06	0.43
1:CA:1010:U:C2	1:CA:1020:G:N1	2.86	0.43
1:CA:1534:A:H5'	1:CA:1535:C:C5	2.53	0.43
2:CB:41:ILE:C	2:CB:41:ILE:HD12	2.43	0.43
2:CB:62:SER:O	2:CB:64:LYS:N	2.51	0.43
2:CB:126:PHE:CD1	2:CB:126:PHE:C	2.93	0.43
4:CD:58:LYS:NZ	4:CD:59:GLN:OE1	2.45	0.43
5:CE:149:SER:OG	5:CE:152:MET:HG3	2.17	0.43
8:CH:30:SER:O	8:CH:31:LYS:C	2.60	0.43
11:CK:100:LEU:C	11:CK:102:ALA:N	2.73	0.43
12:CL:31:ARG:HD2	12:CL:79:VAL:HG11	2.00	0.43
13:CM:20:THR:HG22	13:CM:26:GLY:O	2.18	0.43
15:CO:19:ALA:O	15:CO:20:ASN:CB	2.65	0.43
15:CO:74:ASP:OD2	15:CO:77:ARG:HG3	2.18	0.43
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	1.99	0.43
17:CQ:75:LEU:CD1	17:CQ:75:LEU:C	2.91	0.43
22:DA:170:U:N3	22:DA:171:U:C5	2.87	0.43
22:DA:238:C:H2'	22:DA:239:C:O4'	2.18	0.43
22:DA:476:G:O4'	22:DA:505:A:C2	2.71	0.43
22:DA:484:C:OP1	42:DU:48:PRO:HG3	2.17	0.43
22:DA:527:C:H2'	22:DA:2779:U:O2	2.17	0.43
22:DA:533:G:C6	22:DA:534:U:C4	3.06	0.43
22:DA:579:G:C2	22:DA:1262:A:C6	3.06	0.43
22:DA:609:A:C5	22:DA:610:C:C2	3.06	0.43
22:DA:864:G:N2	22:DA:913:U:C2	2.86	0.43
22:DA:1483:G:C5	22:DA:1484:U:C5	3.06	0.43
22:DA:2066:C:H5"	57:DA:3502:HOH:O	2.18	0.43
22:DA:2075:U:O2'	22:DA:2077:A:OP2	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2196:C:N3	22:DA:2197:U:C4	2.86	0.43
22:DA:2234:G:C5	22:DA:2235:G:C8	3.06	0.43
22:DA:2387:U:H1'	44:DW:41:ARG:NE	2.33	0.43
22:DA:2751:G:N3	22:DA:2751:G:H2'	2.33	0.43
22:DA:2812:G:N2	22:DA:2889:C:C2	2.86	0.43
22:DA:2831:G:N7	25:DD:59:ARG:NH1	2.66	0.43
22:DA:2898:U:O2'	31:DJ:134:ALA:O	2.34	0.43
30:DI:18:ALA:O	30:DI:19:ASN:HB3	2.17	0.43
32:DK:1:MET:HE2	32:DK:32:TYR:CE2	2.53	0.43
33:DL:38:GLN:C	33:DL:40:SER:H	2.26	0.43
40:DS:85:ILE:HG22	40:DS:86:MET:N	2.32	0.43
46:DY:1:MET:HA	46:DY:4:LYS:HB2	2.00	0.43
47:DZ:10:THR:HG22	47:DZ:54:MET:HA	1.99	0.43
1:AA:254:G:OP1	17:AQ:70:THR:CG2	2.66	0.43
1:AA:346:G:C8	37:BP:37:LYS:HE2	2.53	0.43
1:AA:775:G:O2'	1:AA:776:G:H5'	2.18	0.43
1:AA:977:A:H1'	1:AA:982:U:O4	2.18	0.43
1:AA:1144:G:N1	1:AA:1145:A:H2	2.15	0.43
1:AA:1216:A:H2'	1:AA:1217:C:H6	1.83	0.43
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.53	0.43
4:AD:78:GLU:OE2	4:AD:81:ARG:NH1	2.50	0.43
4:AD:174:ASP:CG	4:AD:177:LYS:HE2	2.43	0.43
5:AE:13:GLU:CB	5:AE:39:VAL:HG12	2.48	0.43
6:AF:36:ILE:HG23	6:AF:36:ILE:O	2.18	0.43
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.49	0.43
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.99	0.43
10:AJ:35:GLN:O	10:AJ:36:VAL:O	2.36	0.43
10:AJ:49:PHE:N	10:AJ:49:PHE:CD1	2.86	0.43
11:AK:70:CYS:O	11:AK:74:VAL:HG22	2.19	0.43
12:AL:4:VAL:O	12:AL:8:VAL:HG23	2.18	0.43
17:AQ:60:GLU:OE2	17:AQ:77:ARG:HD3	2.18	0.43
17:AQ:83:VAL:HG13	17:AQ:83:VAL:OXT	2.17	0.43
18:AR:47:THR:OG1	18:AR:48:ARG:N	2.51	0.43
19:AS:65:GLU:OE2	19:AS:66:MET:N	2.51	0.43
22:BA:423:A:H5"	22:BA:424:G:H5'	2.00	0.43
22:BA:445:C:OP1	38:BQ:2:ALA:HA	2.18	0.43
22:BA:518:G:H2'	22:BA:519:U:C6	2.53	0.43
22:BA:540:C:O2'	22:BA:541:A:H5'	2.18	0.43
22:BA:1421:G:C2	22:BA:1422:G:N7	2.85	0.43
22:BA:1820:U:OP1	24:BC:177:ARG:HG2	2.18	0.43
22:BA:2139:U:C2	22:BA:2140:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:71:LYS:HZ1	24:BC:98:ASP:CG	2.26	0.43
24:BC:247:PRO:HD2	24:BC:248:TRP:CZ3	2.53	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
29:BH:89:LYS:CD	1:CA:359:G:OP1	2.66	0.43
30:BI:75:PRO:O	30:BI:79:LEU:CD1	2.66	0.43
30:BI:113:LYS:HD3	30:BI:117:MET:CG	2.46	0.43
36:BO:62:LEU:HD22	36:BO:70:ALA:HA	1.99	0.43
36:BO:94:ARG:O	36:BO:96:GLY:N	2.51	0.43
39:BR:34:GLU:OE2	39:BR:60:LYS:NZ	2.47	0.43
42:BU:89:ASP:CG	42:BU:90:GLY:N	2.75	0.43
44:BW:23:VAL:C	44:BW:24:LYS:HD3	2.43	0.43
1:CA:55:A:N6	1:CA:56:U:C2	2.87	0.43
1:CA:72:A:C5	1:CA:73:C:C4	3.06	0.43
1:CA:160:A:H2'	1:CA:161:A:O4'	2.18	0.43
1:CA:527:G:C6	1:CA:528:C:C5	3.06	0.43
1:CA:651:C:C4	1:CA:652:U:O4	2.70	0.43
1:CA:756:C:H2'	1:CA:757:U:H5'	2.01	0.43
1:CA:1317:C:O2'	14:CN:49:GLN:CG	2.66	0.43
1:CA:1534:A:H4'	1:CA:1535:C:H2'	2.00	0.43
2:CB:210:VAL:HG22	2:CB:211:THR:H	1.82	0.43
4:CD:78:GLU:OE2	4:CD:81:ARG:NH1	2.51	0.43
5:CE:41:ASP:O	5:CE:43:ASN:N	2.51	0.43
5:CE:57:PRO:O	5:CE:58:ALA:C	2.61	0.43
6:CF:59:TYR:HE2	18:CR:67:LEU:CD2	2.31	0.43
6:CF:62:MET:HE2	6:CF:62:MET:HB2	1.94	0.43
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.18	0.43
9:CI:81:HIS:O	9:CI:85:ARG:HB2	2.18	0.43
13:CM:58:ASP:C	13:CM:58:ASP:OD1	2.60	0.43
17:CQ:60:GLU:HB3	17:CQ:76:VAL:CG2	2.48	0.43
22:DA:12:U:O2	22:DA:12:U:C2'	2.66	0.43
22:DA:249:C:O2'	33:DL:63:LYS:NZ	2.36	0.43
22:DA:438:G:C6	22:DA:439:A:C6	3.05	0.43
22:DA:695:G:C6	22:DA:768:G:C5	3.06	0.43
22:DA:833:A:H2'	22:DA:834:G:C8	2.53	0.43
22:DA:993:G:N2	39:DR:23:GLU:OE1	2.50	0.43
22:DA:1043:C:C4	22:DA:1044:C:C4	3.06	0.43
22:DA:1120:G:C5	22:DA:1121:C:C5	3.06	0.43
22:DA:1378:A:C4'	22:DA:1379:U:OP1	2.66	0.43
22:DA:1707:G:H1'	22:DA:1756:G:C4	2.52	0.43
22:DA:2050:C:N4	22:DA:2051:A:C6	2.86	0.43
22:DA:2059:A:H2'	22:DA:2503:A:N1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2094:A:P	29:DH:22:LYS:HG3	2.56	0.43
23:DB:95:U:OP2	43:DV:19:ARG:NH1	2.51	0.43
26:DE:145:ASP:OD2	26:DE:166:LYS:HB3	2.18	0.43
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.43
34:DM:20:LEU:N	34:DM:20:LEU:HD22	2.33	0.43
40:DS:18:ARG:HA	40:DS:21:ALA:HB3	1.99	0.43
42:DU:10:GLU:OE2	42:DU:73:PHE:CD2	2.71	0.43
42:DU:13:VAL:HG21	42:DU:39:ILE:HG21	2.01	0.43
43:DV:48:MET:O	43:DV:51:GLN:NE2	2.50	0.43
1:AA:66:A:C6	1:AA:67:C:C5	3.06	0.43
1:AA:316:C:C2	1:AA:317:U:H5	2.36	0.43
1:AA:915:A:C2	1:AA:916:U:H1'	2.53	0.43
1:AA:987:G:C2	1:AA:988:G:C8	3.07	0.43
1:AA:993:G:O2'	1:AA:994:A:N7	2.51	0.43
2:AB:95:ARG:HH12	2:AB:97:LEU:HA	1.83	0.43
2:AB:118:GLU:O	2:AB:121:SER:HB3	2.18	0.43
3:AC:101:ILE:O	3:AC:101:ILE:HG12	2.18	0.43
4:AD:35:GLU:C	4:AD:35:GLU:CD	2.87	0.43
5:AE:149:SER:CB	5:AE:152:MET:HB2	2.49	0.43
7:AG:25:LYS:HB2	7:AG:101:MET:HE1	2.00	0.43
7:AG:102:ARG:O	7:AG:106:GLU:HB3	2.18	0.43
10:AJ:52:LEU:HD11	10:AJ:58:ASN:O	2.16	0.43
11:AK:54:GLY:C	11:AK:56:ARG:N	2.74	0.43
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.33	0.43
15:AO:39:LEU:O	15:AO:42:HIS:N	2.52	0.43
18:AR:62:ALA:CB	18:AR:68:LEU:HD12	2.47	0.43
19:AS:34:TRP:O	19:AS:36:ARG:N	2.48	0.43
19:AS:52:HIS:CD2	19:AS:54:GLY:H	2.36	0.43
22:BA:80:G:O2'	22:BA:294:A:N1	2.46	0.43
22:BA:170:U:C2	22:BA:171:U:C6	3.06	0.43
22:BA:458:G:N2	22:BA:469:G:H2'	2.33	0.43
22:BA:594:U:H2'	22:BA:595:C:C6	2.54	0.43
22:BA:1309:G:H4'	50:B2:7:PRO:CB	2.40	0.43
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.48	0.43
22:BA:1570:A:H2'	22:BA:1571:A:C8	2.53	0.43
22:BA:1637:A:H5'	22:BA:1760:C:O2'	2.18	0.43
22:BA:1915:U:H2'	22:BA:1916:A:H8	1.80	0.43
22:BA:1917:U:C6	22:BA:1918:A:N7	2.86	0.43
22:BA:2373:G:H2'	22:BA:2374:C:C6	2.53	0.43
22:BA:2502:G:H5"	22:BA:2503:A:O5'	2.19	0.43
24:BC:129:THR:C	24:BC:130:LEU:HD23	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:145:ASP:CB	26:BE:184:ASP:OD2	2.66	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
39:BR:48:LYS:O	39:BR:49:ILE:C	2.62	0.43
42:BU:5:ILE:CD1	42:BU:72:ILE:HG23	2.48	0.43
45:BX:43:GLU:OE2	45:BX:45:ARG:NH2	2.50	0.43
53:B5:66:PRO:HG2	53:B5:194:ILE:CB	2.48	0.43
1:CA:401:C:P	4:CD:70:ARG:HD3	2.58	0.43
1:CA:583:A:C8	1:CA:584:G:C8	3.06	0.43
1:CA:805:C:H2'	1:CA:806:C:C6	2.52	0.43
1:CA:899:C:H6	1:CA:899:C:OP1	2.01	0.43
1:CA:946:A:O2'	1:CA:1333:A:O2'	2.31	0.43
1:CA:1014:A:H5"	19:CS:14:HIS:CD2	2.53	0.43
1:CA:1073:U:C4	1:CA:1074:G:N7	2.87	0.43
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.65	0.43
1:CA:1361:G:C3'	1:CA:1362:A:C5'	2.92	0.43
1:CA:1446:A:N6	1:CA:1447:A:H62	2.15	0.43
1:CA:1483:A:N1	22:DA:1959:G:O2'	2.45	0.43
2:CB:96:TRP:CZ3	2:CB:175:GLU:OE2	2.71	0.43
3:CC:50:ALA:O	3:CC:51:SER:HB2	2.19	0.43
4:CD:125:VAL:HA	4:CD:142:VAL:O	2.18	0.43
4:CD:153:SER:O	4:CD:154:ARG:C	2.60	0.43
5:CE:38:VAL:CG1	5:CE:117:VAL:HG21	2.48	0.43
7:CG:50:LEU:O	7:CG:50:LEU:HD13	2.18	0.43
8:CH:53:GLY:C	8:CH:54:ASP:CG	2.85	0.43
8:CH:78:VAL:HB	8:CH:126:ILE:O	2.17	0.43
8:CH:96:MET:HE2	8:CH:96:MET:HB3	1.95	0.43
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.18	0.43
12:CL:24:LEU:HB2	12:CL:59:ASN:OD1	2.18	0.43
17:CQ:27:ARG:CG	17:CQ:40:ARG:HB3	2.49	0.43
22:DA:61:C:OP1	46:DY:44:LYS:HD3	2.18	0.43
22:DA:120:U:O4	22:DA:177:G:C8	2.71	0.43
22:DA:190:A:N6	22:DA:191:A:N1	2.66	0.43
22:DA:511:U:O4	22:DA:512:G:N1	2.50	0.43
22:DA:533:G:O5'	38:DQ:24:TYR:CD1	2.71	0.43
22:DA:589:U:N3	22:DA:590:A:N7	2.67	0.43
22:DA:655:A:H4'	22:DA:656:G:OP1	2.17	0.43
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.48	0.43
22:DA:1745:A:C2	22:DA:1746:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1953:A:H1'	22:DA:2560:A:O4'	2.17	0.43
22:DA:2023:C:O2'	22:DA:2024:G:H5'	2.18	0.43
22:DA:2157:G:O2'	22:DA:2158:A:O4'	2.36	0.43
22:DA:2230:G:C6	22:DA:2231:U:C4	3.07	0.43
22:DA:2294:G:OP1	36:DO:94:ARG:NH1	2.52	0.43
22:DA:2514:U:H2'	22:DA:2515:C:C6	2.54	0.43
22:DA:2531:A:C4	22:DA:2532:G:C8	3.06	0.43
22:DA:2635:A:H5"	25:DD:79:LEU:O	2.19	0.43
24:DC:10:SER:O	24:DC:13:ARG:HB3	2.18	0.43
24:DC:31:ALA:HB3	24:DC:32:PRO:HD3	1.99	0.43
32:DK:105:ARG:HG2	32:DK:122:VAL:HG12	2.00	0.43
42:DU:98:SER:O	42:DU:99:ASN:CB	2.66	0.43
47:DZ:3:LYS:CD	47:DZ:3:LYS:N	2.82	0.43
47:DZ:47:MET:O	47:DZ:51:VAL:HG22	2.19	0.43
1:AA:263:A:H2'	1:AA:264:C:C5	2.53	0.43
1:AA:316:C:N3	1:AA:317:U:C5	2.87	0.43
1:AA:655:A:C2'	1:AA:656:G:O5'	2.66	0.43
1:AA:863:U:H2'	1:AA:865:A:OP2	2.19	0.43
2:AB:17:GLY:O	2:AB:18:HIS:HB2	2.18	0.43
5:AE:101:GLU:CB	5:AE:122:ASN:HB2	2.48	0.43
5:AE:119:GLY:O	5:AE:121:HIS:ND1	2.51	0.43
12:AL:5:ASN:O	12:AL:8:VAL:HB	2.18	0.43
17:AQ:48:ASP:HB2	17:AQ:52:GLU:OE2	2.18	0.43
22:BA:348:A:H2'	22:BA:349:U:O4'	2.19	0.43
22:BA:435:C:H2'	22:BA:436:C:H5'	1.99	0.43
22:BA:477:A:H2'	22:BA:478:A:C8	2.52	0.43
22:BA:615:U:C4	26:BE:35:TYR:CZ	3.06	0.43
22:BA:815:C:H2'	22:BA:816:C:H6	1.83	0.43
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.50	0.43
22:BA:1850:G:C6	22:BA:1851:U:C4	3.06	0.43
22:BA:2377:A:H2'	22:BA:2378:A:H5'	1.99	0.43
22:BA:2458:G:C2	22:BA:2490:G:N2	2.86	0.43
22:BA:2536:G:C5	22:BA:2537:U:C4	3.06	0.43
23:BB:46:A:C5	23:BB:47:C:C5	3.06	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
30:BI:19:ASN:OD1	30:BI:28:LEU:HD11	2.18	0.43
31:BJ:64:VAL:HG13	31:BJ:68:LYS:HB2	1.99	0.43
31:BJ:69:ARG:O	31:BJ:89:PHE:HB3	2.18	0.43
31:BJ:125:TYR:OH	31:BJ:132:HIS:NE2	2.45	0.43
34:BM:109:PRO:O	34:BM:110:GLU:C	2.62	0.43
45:BX:15:GLY:O	45:BX:27:ARG:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:570:G:H2'	1:CA:571:U:H6	1.82	0.43
1:CA:1069:C:H2'	1:CA:1070:U:O4'	2.18	0.43
1:CA:1150:A:N6	1:CA:1151:A:H62	2.17	0.43
1:CA:1172:C:H2'	1:CA:1173:U:C6	2.54	0.43
1:CA:1221:G:O3'	19:CS:77:THR:HG21	2.18	0.43
2:CB:55:ALA:O	2:CB:59:LYS:HB2	2.19	0.43
5:CE:25:VAL:N	5:CE:28:GLY:O	2.44	0.43
10:CJ:37:ARG:NE	10:CJ:77:VAL:HG21	2.32	0.43
12:CL:99:ARG:HD2	12:CL:104:CYS:SG	2.58	0.43
18:CR:20:GLU:HG3	18:CR:55:LEU:HD13	2.01	0.43
22:DA:85:G:P	42:DU:7:ARG:HB2	2.59	0.43
22:DA:136:G:C2	22:DA:144:A:C5	3.06	0.43
22:DA:697:G:C2	22:DA:766:U:O2	2.72	0.43
22:DA:931:U:O4	22:DA:1184:U:O4'	2.35	0.43
22:DA:996:A:C2	22:DA:997:G:N9	2.86	0.43
22:DA:1544:A:N6	22:DA:1545:A:C6	2.86	0.43
22:DA:1691:C:C4	22:DA:1692:U:C4	3.06	0.43
22:DA:1783:A:C2	22:DA:2587:A:C2	3.05	0.43
22:DA:1817:G:O2'	22:DA:1818:U:H5'	2.18	0.43
22:DA:1823:G:C8	57:DA:3651:HOH:O	2.57	0.43
22:DA:1906:G:H5"	22:DA:1929:G:O2'	2.18	0.43
22:DA:2428:G:H5"	22:DA:2429:G:P	2.58	0.43
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.17	0.43
23:DB:35:C:C2'	23:DB:36:C:O5'	2.66	0.43
23:DB:85:G:N2	23:DB:92:C:C2	2.86	0.43
26:DE:12:LEU:HD23	26:DE:13:THR:N	2.34	0.43
26:DE:28:VAL:O	26:DE:32:VAL:HG23	2.18	0.43
33:DL:94:THR:CG2	33:DL:95:LEU:N	2.81	0.43
35:DN:106:ASP:OD1	35:DN:107:ASN:N	2.51	0.43
36:DO:18:LEU:HD13	36:DO:18:LEU:HA	1.89	0.43
36:DO:58:ILE:HG22	36:DO:58:ILE:O	2.18	0.43
38:DQ:58:ARG:NH2	38:DQ:92:ARG:CZ	2.82	0.43
39:DR:58:VAL:O	39:DR:102:SER:HB2	2.19	0.43
40:DS:32:ALA:O	40:DS:33:LEU:C	2.61	0.43
41:DT:2:ILE:HA	41:DT:3:ARG:CB	2.49	0.43
42:DU:7:ARG:CG	42:DU:8:ASP:H	2.31	0.43
42:DU:83:VAL:HG11	42:DU:94:ARG:HD2	1.99	0.43
45:DX:68:LEU:HD22	45:DX:78:TYR:CZ	2.54	0.43
47:DZ:7:ILE:O	47:DZ:35:THR:HA	2.18	0.43
49:D1:45:GLN:OE1	49:D1:45:GLN:HA	2.18	0.43
1:AA:66:A:O4'	1:AA:173:U:C4	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:135:C:C2'	1:AA:136:C:H5'	2.49	0.43
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.18	0.43
4:AD:100:ASN:O	4:AD:104:ARG:HB2	2.19	0.43
4:AD:120:HIS:O	4:AD:121:LYS:C	2.62	0.43
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.33	0.43
10:AJ:41:PRO:O	10:AJ:71:LEU:O	2.36	0.43
14:AN:13:ARG:O	14:AN:17:ALA:HB2	2.19	0.43
22:BA:126:A:O5'	50:B2:19:ARG:HG3	2.19	0.43
22:BA:1050:A:C2	22:BA:2751:G:C5	3.06	0.43
22:BA:1081:U:O2	22:BA:1081:U:H2'	2.18	0.43
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.48	0.43
22:BA:2074:U:H4'	22:BA:2598:A:O4'	2.18	0.43
22:BA:2477:U:O2	52:B4:4:ARG:NH2	2.52	0.43
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.52	0.43
24:BC:31:ALA:N	24:BC:32:PRO:CD	2.81	0.43
24:BC:204:VAL:O	24:BC:206:GLY:N	2.51	0.43
26:BE:189:THR:HG22	26:BE:191:ASP:H	1.83	0.43
27:BF:31:VAL:O	27:BF:31:VAL:HG23	2.18	0.43
32:BK:12:ASP:OD1	32:BK:14:SER:HB3	2.19	0.43
33:BL:124:GLY:C	33:BL:125:LEU:HD12	2.44	0.43
38:BQ:6:ARG:O	38:BQ:7:GLY:C	2.61	0.43
40:BS:43:ALA:O	40:BS:44:ALA:C	2.60	0.43
41:BT:16:VAL:O	41:BT:17:SER:CB	2.66	0.43
43:BV:26:PHE:HB2	43:BV:27:PRO:HD2	2.00	0.43
53:B5:50:ILE:CG2	53:B5:51:ASP:H	2.31	0.43
53:B5:94:TYR:O	53:B5:95:VAL:HG23	2.19	0.43
1:CA:182:A:N7	1:CA:184:G:N7	2.66	0.43
1:CA:411:A:C6	1:CA:429:U:C4	3.07	0.43
1:CA:496:A:C2	1:CA:497:G:C5	3.06	0.43
1:CA:801:U:H2'	1:CA:802:A:C8	2.54	0.43
1:CA:1028:C:C6	1:CA:1028:C:OP2	2.71	0.43
1:CA:1099:G:H2'	1:CA:1100:C:O4'	2.19	0.43
1:CA:1112:C:N4	3:CC:178:LEU:HD23	2.34	0.43
1:CA:1323:G:H4'	1:CA:1362:A:C2	2.54	0.43
2:CB:17:GLY:O	2:CB:39:HIS:O	2.37	0.43
10:CJ:50:THR:OG1	10:CJ:64:GLN:HG2	2.19	0.43
10:CJ:83:THR:O	10:CJ:83:THR:HG23	2.18	0.43
18:CR:33:ILE:CA	18:CR:40:VAL:HG23	2.49	0.43
19:CS:55:ARG:NE	19:CS:79:THR:CG2	2.82	0.43
22:DA:157:C:H2'	22:DA:158:U:O4'	2.18	0.43
22:DA:183:C:C5	22:DA:184:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:303:G:C2	22:DA:304:U:C2	3.06	0.43
22:DA:402:A:H2'	22:DA:403:U:H5'	1.99	0.43
22:DA:579:G:H5'	22:DA:2018:G:OP2	2.17	0.43
22:DA:593:U:C2	22:DA:594:U:C5	3.06	0.43
22:DA:626:A:C2	33:DL:78:ARG:HD3	2.53	0.43
22:DA:674:G:H1'	26:DE:69:ARG:HD3	2.00	0.43
22:DA:1194:A:C2'	22:DA:1195:G:O5'	2.67	0.43
22:DA:1307:A:N6	22:DA:1606:C:O2	2.52	0.43
22:DA:1320:C:N4	22:DA:1331:G:N7	2.65	0.43
22:DA:1352:U:C5	22:DA:1377:G:C6	3.07	0.43
22:DA:1360:G:C6	22:DA:1372:U:C2	3.06	0.43
22:DA:1581:G:C5	22:DA:1582:C:C5	3.07	0.43
22:DA:1599:U:O4	22:DA:1600:C:N4	2.52	0.43
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	2.00	0.43
22:DA:1665:A:C6	22:DA:1666:G:C5	3.07	0.43
22:DA:2127:G:O2'	22:DA:2173:A:C2	2.72	0.43
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.19	0.43
26:DE:22:ASP:OD1	26:DE:22:ASP:N	2.51	0.43
26:DE:170:ARG:NH2	26:DE:176:ASP:OD1	2.51	0.43
27:DF:122:PHE:CD1	27:DF:166:GLY:HA3	2.54	0.43
28:DG:118:PRO:HG3	28:DG:144:VAL:HG21	2.00	0.43
31:DJ:9:GLU:O	31:DJ:10:THR:CG2	2.66	0.43
31:DJ:36:LEU:HD23	31:DJ:121:LYS:HB2	2.00	0.43
36:DO:33:ARG:O	36:DO:33:ARG:HG2	2.19	0.43
37:DP:79:PRO:O	37:DP:80:VAL:C	2.60	0.43
37:DP:89:ARG:O	37:DP:112:GLU:HA	2.19	0.43
39:DR:54:VAL:HG12	39:DR:55:ASP:N	2.34	0.43
42:DU:71:ALA:HB3	42:DU:80:ALA:HB1	2.01	0.43
44:DW:23:VAL:HG22	44:DW:38:VAL:HG13	2.01	0.43
1:AA:61:G:C5	1:AA:62:U:C4	3.07	0.43
1:AA:131:A:H2'	1:AA:132:C:H6	1.75	0.43
1:AA:131:A:C2	1:AA:132:C:C5	3.07	0.43
1:AA:306:A:H2'	1:AA:307:C:O4'	2.17	0.43
1:AA:716:A:C6	1:AA:717:U:N3	2.86	0.43
1:AA:909:A:C2'	1:AA:910:C:O5'	2.67	0.43
1:AA:914:A:N3	1:AA:915:A:C8	2.87	0.43
1:AA:1082:A:C2	1:AA:1083:U:O2	2.72	0.43
1:AA:1140:C:O2'	1:AA:1141:C:P	2.76	0.43
2:AB:101:LEU:HD13	2:AB:101:LEU:HA	1.91	0.43
2:AB:103:ASN:CG	2:AB:106:THR:HB	2.44	0.43
2:AB:165:ASP:O	2:AB:166:ALA:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:53:VAL:HG23	4:AD:54:GLN:N	2.33	0.43
7:AG:146:GLU:HA	7:AG:149:LYS:HB2	2.01	0.43
11:AK:38:GLN:O	11:AK:39:GLY:C	2.60	0.43
14:AN:16:LEU:HD12	14:AN:54:ASP:HB2	2.01	0.43
17:AQ:16:LYS:O	17:AQ:16:LYS:HG3	2.18	0.43
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.36	0.43
21:AU:14:VAL:O	21:AU:16:LEU:CD1	2.66	0.43
21:AU:41:PRO:HA	21:AU:44:GLU:HB2	2.00	0.43
22:BA:934:U:H2'	22:BA:935:C:C6	2.54	0.43
22:BA:1079:C:C4	22:BA:1088:A:C2	3.06	0.43
22:BA:1355:G:C4	22:BA:1356:G:C8	3.06	0.43
22:BA:1457:U:H5"	22:BA:1458:U:OP1	2.18	0.43
22:BA:1854:A:H2	22:BA:2087:G:N3	2.17	0.43
22:BA:2226:C:O2	22:BA:2226:C:H2'	2.19	0.43
28:BG:153:ARG:O	28:BG:154:PRO:C	2.62	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
34:BM:28:PHE:HB2	34:BM:104:GLU:OE2	2.18	0.43
38:BQ:25:TYR:CD1	38:BQ:26:GLY:N	2.87	0.43
39:BR:25:LEU:N	39:BR:94:THR:CG2	2.81	0.43
39:BR:62:GLU:O	39:BR:64:VAL:HG13	2.18	0.43
48:B0:25:VAL:HG13	48:B0:26:THR:N	2.32	0.43
49:B1:25:LYS:HD3	49:B1:52:ALA:O	2.18	0.43
1:CA:178:C:H2'	1:CA:179:A:O4'	2.18	0.43
1:CA:341:C:O2	1:CA:349:A:C2	2.71	0.43
1:CA:354:G:C2	1:CA:355:C:C5	3.07	0.43
1:CA:756:C:H2'	1:CA:757:U:C5'	2.49	0.43
1:CA:786:G:C2	1:CA:787:A:H1'	2.54	0.43
1:CA:1086:U:H4'	1:CA:1086:U:OP1	2.18	0.43
1:CA:1092:A:C6	1:CA:1183:U:O2	2.72	0.43
1:CA:1417:G:N2	1:CA:1484:C:N4	2.67	0.43
2:CB:71:GLY:O	2:CB:93:ASN:HA	2.19	0.43
4:CD:9:LEU:O	4:CD:10:LYS:C	2.61	0.43
4:CD:38:PRO:HD2	4:CD:42:GLY:HA3	2.01	0.43
5:CE:13:GLU:OE1	5:CE:68:ARG:NH1	2.52	0.43
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	2.01	0.43
8:CH:8:ALA:HB2	8:CH:77:ARG:HG3	2.01	0.43
8:CH:101:ILE:HD11	8:CH:129:VAL:CG2	2.49	0.43
15:CO:56:LEU:O	15:CO:59:MET:HB2	2.18	0.43
22:DA:58:G:N3	22:DA:70:G:N2	2.67	0.43
22:DA:78:U:OP2	46:DY:2:LYS:CD	2.67	0.43
22:DA:186:G:N2	22:DA:211:C:C2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:271:G:C2	22:DA:367:G:C2	3.07	0.43
22:DA:289:G:H2'	22:DA:290:U:O4'	2.19	0.43
22:DA:786:C:H4'	22:DA:1780:A:N7	2.33	0.43
22:DA:1056:G:H5"	22:DA:1057:A:O4'	2.18	0.43
22:DA:1178:C:N4	22:DA:1180:U:N3	2.66	0.43
22:DA:1241:A:C2	22:DA:1242:U:H1'	2.54	0.43
22:DA:1277:G:C2	35:DN:23:ASN:OD1	2.71	0.43
22:DA:1314:C:O2	22:DA:1314:C:H2'	2.19	0.43
22:DA:1483:G:C4	22:DA:1484:U:C5	3.06	0.43
22:DA:1524:G:H2'	22:DA:1524:G:N3	2.34	0.43
22:DA:1608:A:C5	22:DA:1611:C:C5	3.07	0.43
22:DA:1809:A:C5	22:DA:1810:A:N7	2.86	0.43
22:DA:2100:G:C6	22:DA:2190:G:C5	3.07	0.43
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.71	0.43
22:DA:2742:G:OP1	52:D4:36:ARG:HD3	2.19	0.43
23:DB:109:A:C6	23:DB:110:C:C4	3.06	0.43
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	2.00	0.43
36:DO:79:ALA:O	36:DO:83:LEU:HG	2.19	0.43
38:DQ:45:TYR:O	38:DQ:46:ALA:C	2.61	0.43
40:DS:58:ALA:O	40:DS:62:ASP:C	2.61	0.43
42:DU:13:VAL:HG21	42:DU:39:ILE:HD12	2.00	0.43
42:DU:24:LYS:HE3	42:DU:24:LYS:HB3	1.88	0.43
42:DU:49:VAL:O	42:DU:54:GLN:HB3	2.18	0.43
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.34	0.43
46:DY:45:GLN:C	46:DY:47:ARG:H	2.26	0.43
1:AA:66:A:H4'	1:AA:173:U:C5	2.54	0.43
1:AA:100:G:O6	1:AA:101:A:C6	2.72	0.43
1:AA:100:G:C6	1:AA:101:A:C5	3.07	0.43
1:AA:300:A:H2'	1:AA:301:G:O4'	2.19	0.43
1:AA:310:G:H5"	16:AP:31:ARG:HB2	2.00	0.43
1:AA:465:A:H2'	1:AA:466:A:C1'	2.48	0.43
1:AA:472:U:C4	1:AA:473:U:O4	2.72	0.43
1:AA:616:G:N2	1:AA:617:G:C4	2.86	0.43
1:AA:909:A:H2'	1:AA:910:C:O5'	2.19	0.43
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.17	0.43
1:AA:1055:A:C5	1:AA:1206:G:C2	3.06	0.43
1:AA:1202:U:C2	1:AA:1203:C:C6	3.07	0.43
1:AA:1442:G:H3'	1:AA:1442:G:OP2	2.18	0.43
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.18	0.43
3:AC:77:ILE:HA	3:AC:84:VAL:HG23	2.00	0.43
4:AD:132:ILE:O	4:AD:132:ILE:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:147:GLU:OE1	4:AD:148:LYS:NZ	2.52	0.43
5:AE:81:LEU:HD23	5:AE:123:VAL:HG13	2.01	0.43
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	2.00	0.43
8:AH:6:PRO:O	8:AH:9:ASP:N	2.51	0.43
9:AI:80:ARG:NH1	9:AI:103:PHE:CE1	2.87	0.43
10:AJ:17:LEU:HD21	10:AJ:96:VAL:HG22	2.00	0.43
13:AM:65:VAL:HG23	13:AM:66:GLU:N	2.32	0.43
16:AP:16:PHE:C	16:AP:16:PHE:CD1	2.96	0.43
17:AQ:8:LEU:HD22	17:AQ:73:TRP:CH2	2.53	0.43
18:AR:37:GLY:O	18:AR:63:ARG:NH2	2.49	0.43
22:BA:368:A:C6	22:BA:369:U:C4	3.07	0.43
22:BA:686:U:H2'	22:BA:788:A:C2	2.54	0.43
22:BA:980:A:C6	22:BA:981:A:C2	3.06	0.43
22:BA:1344:U:H1'	22:BA:1384:A:H2'	2.00	0.43
22:BA:1505:A:H2'	22:BA:1506:U:O4'	2.18	0.43
22:BA:1908:C:H2'	22:BA:1909:C:C6	2.54	0.43
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.18	0.43
22:BA:2687:U:H2'	22:BA:2688:G:O4'	2.18	0.43
22:BA:2901:C:N4	22:BA:2902:C:C4	2.86	0.43
25:BD:133:THR:O	25:BD:134:HIS:HB2	2.19	0.43
26:BE:199:MET:HE2	26:BE:199:MET:HB3	1.92	0.43
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	2.00	0.43
44:BW:75:LYS:O	44:BW:76:ASN:C	2.61	0.43
49:B1:48:ILE:HD12	49:B1:48:ILE:H	1.83	0.43
53:B5:214:TYR:O	53:B5:215:VAL:CB	2.66	0.43
1:CA:104:G:O2'	1:CA:105:G:H5'	2.18	0.43
1:CA:386:C:N4	1:CA:387:U:C4	2.86	0.43
1:CA:516:U:C4	1:CA:517:G:C6	3.07	0.43
1:CA:784:A:C2	1:CA:785:G:C4	3.06	0.43
1:CA:1140:C:O2'	1:CA:1141:C:P	2.76	0.43
2:CB:15:HIS:O	2:CB:15:HIS:CG	2.71	0.43
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.18	0.43
3:CC:83:ASP:O	3:CC:85:GLU:N	2.52	0.43
5:CE:38:VAL:HG11	5:CE:114:VAL:HA	2.00	0.43
5:CE:107:ALA:HB2	5:CE:125:ALA:HB2	1.99	0.43
6:CF:54:LEU:C	6:CF:55:HIS:O	2.61	0.43
14:CN:85:ARG:NH1	14:CN:89:MET:HE2	2.34	0.43
21:CU:35:ARG:HG2	21:CU:36:GLU:O	2.18	0.43
22:DA:21:A:C6	22:DA:520:G:C6	3.07	0.43
22:DA:460:A:C2	22:DA:470:A:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:674:G:C1’	26:DE:69:ARG:HD3	2.48	0.43
22:DA:818:G:H5’	22:DA:839:U:OP1	2.18	0.43
22:DA:965:C:H4’	22:DA:2273:A:H1’	2.00	0.43
22:DA:1206:G:C6	22:DA:1207:C:C4	3.06	0.43
22:DA:1500:G:C6	22:DA:1501:G:C5	3.06	0.43
22:DA:1665:A:H5”	32:DK:66:LYS:HG3	2.00	0.43
22:DA:1740:G:H2’	22:DA:1741:C:O4’	2.18	0.43
24:DC:107:PRO:HB3	24:DC:142:HIS:CE1	2.54	0.43
28:DG:140:VAL:O	28:DG:140:VAL:HG12	2.17	0.43
29:DH:31:VAL:O	29:DH:32:PRO:C	2.61	0.43
32:DK:17:ARG:HG2	32:DK:47:ILE:HG23	2.00	0.43
32:DK:32:TYR:CD1	32:DK:32:TYR:N	2.86	0.43
33:DL:95:LEU:O	33:DL:100:ILE:CG2	2.67	0.43
38:DQ:76:TYR:CD1	38:DQ:76:TYR:C	2.97	0.43
41:DT:74:ILE:HD12	41:DT:75:GLY:N	2.33	0.43
43:DV:38:LEU:HB3	43:DV:40:ILE:HD11	2.01	0.43
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	2.00	0.43
1:AA:19:A:C2	1:AA:917:G:C5	3.07	0.43
1:AA:174:A:C5	1:AA:175:C:C5	3.07	0.43
1:AA:977:A:O2’	1:AA:979:C:OP2	2.36	0.43
1:AA:1160:G:O2’	1:AA:1161:C:O5’	2.33	0.43
2:AB:59:LYS:O	2:AB:63:ARG:HG3	2.19	0.43
2:AB:60:ILE:O	2:AB:64:LYS:N	2.52	0.43
2:AB:146:ASN:O	2:AB:147:SER:OG	2.36	0.43
4:AD:68:LEU:N	4:AD:68:LEU:CD2	2.81	0.43
4:AD:165:ARG:C	4:AD:167:LYS:N	2.75	0.43
5:AE:115:LEU:O	5:AE:116:GLU:C	2.61	0.43
8:AH:93:PRO:HG3	8:AH:125:ILE:CD1	2.49	0.43
9:AI:90:TYR:O	9:AI:91:ASP:CB	2.67	0.43
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.19	0.43
16:AP:53:ASP:C	16:AP:53:ASP:OD1	2.61	0.43
17:AQ:16:LYS:CA	17:AQ:17:MET:SD	3.07	0.43
17:AQ:75:LEU:C	17:AQ:75:LEU:CD1	2.92	0.43
22:BA:511:U:O4	22:BA:512:G:C6	2.72	0.43
22:BA:687:C:O2’	22:BA:1780:A:N1	2.42	0.43
22:BA:722:A:H2’	22:BA:723:C:O4’	2.18	0.43
22:BA:863:A:H2’	22:BA:864:G:C8	2.54	0.43
22:BA:995:C:H5’	22:BA:995:C:C6	2.53	0.43
22:BA:1047:G:N3	22:BA:1110:G:C2	2.87	0.43
22:BA:1224:U:H4’	39:BR:88:GLY:O	2.19	0.43
22:BA:1661:G:H2’	22:BA:1662:U:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1716:U:C2'	22:BA:1717:A:H5'	2.49	0.43
22:BA:2214:C:H2'	22:BA:2215:C:O4'	2.18	0.43
22:BA:2286:G:H5"	22:BA:2287:A:O5'	2.18	0.43
22:BA:2315:G:H2'	22:BA:2316:G:C8	2.54	0.43
22:BA:2329:U:H2'	22:BA:2330:G:C8	2.53	0.43
22:BA:2658:C:N4	22:BA:2664:G:N2	2.67	0.43
27:BF:38:MET:HE1	27:BF:56:ASP:HB3	2.01	0.43
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.54	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
30:BI:65:ARG:HG3	30:BI:66:SER:N	2.34	0.43
34:BM:106:ASP:CG	34:BM:107:GLY:N	2.75	0.43
35:BN:8:ARG:HB2	35:BN:43:GLU:OE1	2.18	0.43
36:BO:17:LYS:HD2	36:BO:21:LEU:CD1	2.48	0.43
36:BO:83:LEU:N	36:BO:83:LEU:HD23	2.33	0.43
37:BP:33:VAL:HA	37:BP:37:LYS:O	2.18	0.43
38:BQ:52:GLN:HA	38:BQ:55:ARG:HD2	2.01	0.43
1:CA:6:G:H2'	5:CE:124:LEU:CD2	2.48	0.43
1:CA:173:U:H1'	1:CA:197:A:C5	2.54	0.43
1:CA:407:U:H2'	1:CA:408:A:C8	2.54	0.43
1:CA:666:G:C6	1:CA:741:G:C5	3.07	0.43
1:CA:771:G:C2	1:CA:809:G:C2	3.06	0.43
1:CA:891:U:C4	1:CA:906:A:C2	3.07	0.43
1:CA:1133:G:C6	1:CA:1142:G:C6	3.07	0.43
1:CA:1195:C:H2'	1:CA:1197:A:O4'	2.19	0.43
1:CA:1343:G:C5	1:CA:1344:C:C4	3.06	0.43
1:CA:1408:A:C2	1:CA:1494:G:C5	3.06	0.43
1:CA:1422:G:O3'	32:DK:49:ARG:NH2	2.52	0.43
2:CB:16:PHE:CE2	2:CB:18:HIS:NE2	2.87	0.43
4:CD:198:HIS:CD2	4:CD:199:LEU:H	2.36	0.43
5:CE:25:VAL:HG22	5:CE:28:GLY:O	2.19	0.43
5:CE:25:VAL:O	5:CE:26:LYS:C	2.60	0.43
6:CF:3:HIS:O	6:CF:92:THR:HA	2.17	0.43
11:CK:67:ALA:HB1	11:CK:100:LEU:CD1	2.49	0.43
13:CM:19:LEU:HD11	13:CM:33:ILE:HG21	2.01	0.43
17:CQ:8:LEU:N	17:CQ:8:LEU:CD1	2.81	0.43
22:DA:64:A:H2'	22:DA:65:U:C6	2.54	0.43
22:DA:96:C:H4'	46:DY:41:HIS:CD2	2.54	0.43
22:DA:365:U:C4	22:DA:366:C:N4	2.87	0.43
22:DA:666:A:H4'	33:DL:48:ARG:NE	2.34	0.43
22:DA:830:G:C6	22:DA:2448:A:C8	3.07	0.43
22:DA:988:A:C8	47:DZ:14:ILE:HD12	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1317:G:H2'	22:DA:1318:U:O4'	2.19	0.43
22:DA:1426:G:C8	22:DA:1427:A:H2'	2.54	0.43
22:DA:1785:A:O2'	22:DA:1786:A:H2'	2.18	0.43
22:DA:1818:U:H2'	24:DC:156:ARG:CD	2.49	0.43
22:DA:2195:U:O2'	22:DA:2196:C:H5'	2.19	0.43
22:DA:2654:A:C2	22:DA:2656:U:O4	2.72	0.43
22:DA:2660:A:H2'	22:DA:2661:G:O4'	2.19	0.43
22:DA:2744:G:C6	22:DA:2761:A:N6	2.86	0.43
24:DC:121:ASP:O	24:DC:122:ALA:C	2.61	0.43
27:DF:9:LYS:O	27:DF:13:VAL:HG23	2.19	0.43
28:DG:63:ALA:O	28:DG:67:THR:HG23	2.19	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
30:DI:57:VAL:HG22	30:DI:58:VAL:H	1.84	0.43
33:DL:66:PHE:CE2	33:DL:68:SER:HA	2.53	0.43
38:DQ:27:ALA:HB1	38:DQ:31:VAL:CG2	2.49	0.43
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.18	0.43
41:DT:20:ALA:CB	41:DT:31:VAL:HG21	2.49	0.43
46:DY:9:LYS:HB3	46:DY:12:GLU:HG3	1.99	0.43
50:D2:43:THR:HG1	50:D2:44:VAL:N	2.12	0.43
52:D4:16:ILE:HG22	52:D4:17:VAL:N	2.34	0.43
1:AA:55:A:C6	1:AA:56:U:C2	3.07	0.43
1:AA:457:G:O6	1:AA:475:C:N3	2.51	0.43
1:AA:521:G:O2'	1:AA:522:C:H5'	2.19	0.43
1:AA:579:A:C4	1:AA:580:C:C5	3.07	0.43
1:AA:586:C:O3'	8:AH:81:PRO:HB3	2.19	0.43
1:AA:855:U:H2'	1:AA:856:C:C6	2.53	0.43
1:AA:1044:A:C5	1:AA:1045:C:H1'	2.54	0.43
1:AA:1157:A:C2	1:AA:1181:G:C4	3.06	0.43
2:AB:33:GLY:CA	2:AB:40:ILE:H	2.32	0.43
3:AC:139:GLN:O	3:AC:140:ASN:C	2.62	0.43
4:AD:95:GLU:OE1	4:AD:191:LEU:HD22	2.19	0.43
4:AD:105:MET:SD	4:AD:143:VAL:HG22	2.59	0.43
13:AM:78:LYS:O	13:AM:81:MET:N	2.52	0.43
14:AN:33:ASP:O	14:AN:34:VAL:C	2.61	0.43
17:AQ:17:MET:CG	17:AQ:20:SER:HB3	2.49	0.43
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.44	0.43
20:AT:72:ALA:O	20:AT:73:ALA:C	2.61	0.43
20:AT:83:ILE:HD12	20:AT:84:ASN:N	2.33	0.43
21:AU:32:VAL:O	21:AU:32:VAL:HG12	2.18	0.43
22:BA:319:G:C5	22:BA:333:G:C2	3.06	0.43
22:BA:480:A:C2'	22:BA:481:G:OP1	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:493:G:H2'	22:BA:494:G:O4'	2.19	0.43
22:BA:565:C:H2'	22:BA:566:U:O4'	2.19	0.43
22:BA:607:U:C5	22:BA:620:G:C4	3.06	0.43
22:BA:1023:U:O4	22:BA:1142:A:N1	2.52	0.43
22:BA:1056:G:C2	22:BA:1102:C:C5	3.07	0.43
22:BA:1408:G:C6	22:BA:1409:U:C4	3.07	0.43
22:BA:1478:G:H1	22:BA:1513:U:H3	1.66	0.43
22:BA:2360:G:OP1	51:B3:51:SER:OG	2.35	0.43
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.19	0.43
22:BA:2683:C:H4'	25:BD:13:ARG:NH1	2.34	0.43
24:BC:14:ARG:O	24:BC:14:ARG:HG3	2.19	0.43
25:BD:5:VAL:HG21	25:BD:80:TRP:CD2	2.54	0.43
27:BF:48:LYS:O	27:BF:51:ASP:HB2	2.19	0.43
27:BF:101:GLU:O	27:BF:105:THR:HB	2.19	0.43
28:BG:96:ALA:HB2	28:BG:105:LEU:HD23	1.99	0.43
31:BJ:81:ILE:HG12	31:BJ:82:GLY:H	1.83	0.43
32:BK:53:LYS:HG3	32:BK:56:ASP:OD1	2.18	0.43
35:BN:13:ASN:OD1	35:BN:13:ASN:C	2.61	0.43
39:BR:51:VAL:O	39:BR:52:PRO:O	2.37	0.43
41:BT:18:GLU:CD	41:BT:18:GLU:H	2.27	0.43
1:CA:55:A:N7	1:CA:56:U:C4	2.86	0.43
1:CA:81:A:H2'	1:CA:82:G:C8	2.53	0.43
1:CA:438:U:C2	1:CA:494:G:C6	3.07	0.43
1:CA:1069:C:C4	1:CA:1070:U:C5	3.06	0.43
4:CD:166:GLU:O	4:CD:166:GLU:HG2	2.19	0.43
5:CE:94:VAL:CG1	5:CE:111:MET:CE	2.96	0.43
6:CF:35:LYS:HG3	6:CF:37:HIS:NE2	2.33	0.43
7:CG:8:GLY:O	7:CG:9:GLN:CB	2.66	0.43
11:CK:67:ALA:HB1	11:CK:100:LEU:HD13	2.01	0.43
15:CO:58:ARG:O	15:CO:62:GLN:HB2	2.19	0.43
15:CO:60:VAL:O	15:CO:63:ARG:N	2.51	0.43
17:CQ:10:GLY:HA3	17:CQ:25:ILE:HD13	2.01	0.43
18:CR:34:THR:HG22	18:CR:38:LYS:N	2.34	0.43
19:CS:51:VAL:O	19:CS:58:VAL:HG12	2.19	0.43
22:DA:102:U:O4	46:DY:3:ALA:HB3	2.19	0.43
22:DA:310:A:HO2'	22:DA:311:A:P	2.33	0.43
22:DA:570:G:C4	22:DA:2030:A:N7	2.87	0.43
22:DA:581:C:OP1	38:DQ:33:ARG:HG3	2.19	0.43
22:DA:1219:U:H2'	22:DA:1220:G:C8	2.53	0.43
22:DA:1340:U:C5	22:DA:1603:A:C8	3.07	0.43
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2093:G:P	29:DH:24:GLY:H	2.42	0.43
22:DA:2852:G:C2	22:DA:2853:C:C2	3.07	0.43
24:DC:30:PHE:CE2	24:DC:32:PRO:CG	3.02	0.43
25:DD:51:THR:OG1	25:DD:76:GLY:HA3	2.17	0.43
26:DE:25:GLU:OE1	33:DL:6:LEU:HA	2.19	0.43
30:DI:8:TYR:HB3	30:DI:59:ILE:O	2.18	0.43
30:DI:84:ALA:HB1	30:DI:101:ILE:CD1	2.49	0.43
41:DT:20:ALA:O	41:DT:24:MET:HG3	2.18	0.43
43:DV:41:GLU:C	43:DV:42:LEU:HD23	2.43	0.43
43:DV:57:TYR:HA	43:DV:74:ALA:HB3	2.00	0.43
48:D0:44:THR:C	48:D0:46:ASP:H	2.27	0.43
51:D3:15:LYS:HB3	51:D3:23:LYS:HE2	2.00	0.43
1:AA:75:G:N3	1:AA:75:G:H2'	2.33	0.43
1:AA:684:U:O2'	11:AK:40:ASN:O	2.37	0.43
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.19	0.43
2:AB:87:CYS:SG	2:AB:89:GLN:OE1	2.77	0.43
2:AB:219:ALA:O	2:AB:220:THR:HB	2.19	0.43
4:AD:151:LYS:CB	4:AD:156:LYS:HE3	2.49	0.43
6:AF:47:LEU:CD1	6:AF:51:ILE:HG23	2.47	0.43
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.48	0.43
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.19	0.43
13:AM:34:LEU:HD23	13:AM:39:ILE:HB	2.01	0.43
14:AN:72:GLY:O	14:AN:80:SER:HA	2.19	0.43
15:AO:79:THR:O	15:AO:80:GLN:C	2.60	0.43
18:AR:34:THR:OG1	18:AR:35:GLU:N	2.49	0.43
22:BA:359:G:H2'	22:BA:360:U:O4'	2.19	0.43
22:BA:846:U:O2'	22:BA:847:U:P	2.76	0.43
22:BA:1150:C:C2	22:BA:1151:A:C8	3.07	0.43
22:BA:1176:U:N3	22:BA:1177:G:C6	2.87	0.43
22:BA:1179:G:H3'	22:BA:1180:U:C4'	2.48	0.43
22:BA:1300:G:OP1	57:BA:3655:HOH:O	2.22	0.43
22:BA:1378:A:C4'	22:BA:1379:U:OP1	2.67	0.43
22:BA:1459:G:C6	22:BA:1461:C:N3	2.87	0.43
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.53	0.43
22:BA:1594:U:H2'	22:BA:1595:C:C6	2.52	0.43
22:BA:1606:C:O2'	22:BA:1607:C:O5'	2.37	0.43
22:BA:1626:A:HO2'	22:BA:1627:G:P	2.41	0.43
22:BA:1860:G:C6	22:BA:1883:U:C2	3.07	0.43
22:BA:2193:G:O2'	22:BA:2194:U:H5'	2.19	0.43
22:BA:2703:C:O5'	22:BA:2703:C:H6	2.02	0.43
23:BB:14:U:OP2	23:BB:71:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:174:LEU:N	24:BC:174:LEU:CD1	2.82	0.43
47:BZ:36:VAL:CG2	47:BZ:38:ARG:NH2	2.81	0.43
49:B1:34:LEU:HB3	49:B1:52:ALA:HB2	2.00	0.43
1:CA:121:U:O2	1:CA:121:U:O2'	2.35	0.43
1:CA:302:G:O2'	1:CA:556:C:H5"	2.18	0.43
1:CA:370:C:C2	1:CA:371:A:C8	3.07	0.43
1:CA:748:G:H2'	1:CA:749:A:H8	1.84	0.43
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.19	0.43
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.18	0.43
6:CF:62:MET:O	6:CF:63:ASN:HB2	2.19	0.43
6:CF:93:LYS:C	6:CF:94:HIS:CG	2.96	0.43
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.84	0.43
15:CO:3:LEU:HD12	15:CO:3:LEU:HA	1.95	0.43
15:CO:39:LEU:O	15:CO:42:HIS:HB3	2.19	0.43
17:CQ:48:ASP:O	17:CQ:49:GLU:C	2.60	0.43
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.62	0.43
19:CS:4:SER:O	19:CS:5:LEU:CB	2.66	0.43
22:DA:49:A:C8	22:DA:51:G:C2	3.07	0.43
22:DA:119:A:H4'	22:DA:120:U:O5'	2.19	0.43
22:DA:353:C:H2'	22:DA:354:A:C8	2.54	0.43
22:DA:477:A:C2'	22:DA:478:A:O5'	2.67	0.43
22:DA:672:C:C2	22:DA:809:G:N2	2.87	0.43
22:DA:788:A:OP1	22:DA:790:U:O4	2.37	0.43
22:DA:818:G:O2'	22:DA:819:A:O4'	2.35	0.43
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.48	0.43
22:DA:1466:U:O2'	22:DA:1546:G:O2'	2.16	0.43
22:DA:1488:C:N3	22:DA:1489:C:C5	2.86	0.43
22:DA:1675:C:N3	25:DD:133:THR:HG21	2.34	0.43
22:DA:1675:C:C5	22:DA:1676:A:C5	3.07	0.43
22:DA:1731:G:C6	22:DA:1733:G:N7	2.87	0.43
22:DA:2032:G:C8	57:DA:3529:HOH:O	2.63	0.43
22:DA:2229:U:H2'	22:DA:2230:G:H8	1.83	0.43
22:DA:2802:G:C2	22:DA:2803:G:C4	3.07	0.43
24:DC:31:ALA:N	24:DC:32:PRO:HD2	2.34	0.43
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.66	0.43
26:DE:196:VAL:O	26:DE:196:VAL:HG12	2.17	0.43
38:DQ:110:VAL:HG12	38:DQ:114:LYS:HD2	2.00	0.43
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	2.01	0.43
44:DW:15:ASP:OD1	44:DW:16:SER:N	2.52	0.43
1:AA:43:C:H2'	1:AA:44:A:O4'	2.19	0.42
1:AA:495:A:C2	1:AA:496:A:N6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:545:C:H2'	1:AA:545:C:O2	2.19	0.42
1:AA:1002:G:N2	1:AA:1003:G:H1'	2.34	0.42
1:AA:1163:A:C2	1:AA:1174:G:C2	3.06	0.42
1:AA:1307:U:N3	1:AA:1308:U:C4	2.87	0.42
1:AA:1372:U:C4	1:AA:1373:G:C5	3.07	0.42
1:AA:1539:C:H5"	21:AU:18:ARG:CB	2.49	0.42
2:AB:22:TYR:N	2:AB:22:TYR:CD1	2.87	0.42
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.85	0.42
2:AB:74:ARG:O	2:AB:75:ALA:HB2	2.19	0.42
2:AB:109:GLN:N	2:AB:109:GLN:OE1	2.52	0.42
3:AC:29:PHE:HD1	3:AC:29:PHE:O	2.02	0.42
7:AG:102:ARG:O	7:AG:106:GLU:CB	2.67	0.42
8:AH:10:MET:C	8:AH:12:THR:N	2.76	0.42
12:AL:46:ASN:ND2	12:AL:89:ASP:OD2	2.48	0.42
13:AM:99:GLY:O	13:AM:100:GLN:C	2.61	0.42
16:AP:20:VAL:HG23	16:AP:35:ARG:HA	2.00	0.42
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.19	0.42
22:BA:323:C:C4	22:BA:333:G:C8	3.06	0.42
22:BA:499:U:C4	22:BA:500:G:C6	3.07	0.42
22:BA:720:U:H2'	22:BA:721:A:C8	2.53	0.42
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.19	0.42
22:BA:1654:A:H1'	22:BA:2823:A:H5'	2.01	0.42
22:BA:1737:G:C6	22:BA:1738:G:N1	2.87	0.42
22:BA:1827:U:C2'	22:BA:1828:G:O5'	2.67	0.42
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.48	0.42
22:BA:2120:G:N2	22:BA:2179:C:O2	2.52	0.42
22:BA:2271:G:H2'	22:BA:2272:U:H6	1.83	0.42
22:BA:2738:A:C2	22:BA:2739:U:H1'	2.54	0.42
22:BA:2740:A:H2'	22:BA:2741:A:C8	2.53	0.42
23:BB:5:U:OP1	23:BB:61:G:O2'	2.25	0.42
24:BC:135:ILE:O	24:BC:136:PRO:C	2.62	0.42
24:BC:252:THR:O	24:BC:253:LYS:C	2.61	0.42
27:BF:32:GLU:O	27:BF:96:MET:HE1	2.19	0.42
27:BF:80:ARG:NE	27:BF:81:GLN:O	2.52	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
30:BI:42:PHE:CE2	30:BI:46:THR:HG21	2.53	0.42
37:BP:26:VAL:HG13	37:BP:47:VAL:HG23	2.00	0.42
37:BP:34:GLU:O	37:BP:36:SER:N	2.52	0.42
46:BY:32:ALA:HB2	46:BY:37:LEU:HD23	2.00	0.42
52:B4:1:MET:CE	52:B4:34:LYS:HG2	2.49	0.42
1:CA:110:C:N4	1:CA:111:G:C6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:505:G:C6	1:CA:535:A:C2	3.07	0.42
1:CA:793:U:O2	1:CA:1516:G:H4'	2.18	0.42
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.19	0.42
1:CA:1365:G:C5	1:CA:1366:C:C4	3.07	0.42
2:CB:24:ASN:O	2:CB:25:PRO:C	2.62	0.42
4:CD:26:ARG:HG3	4:CD:27:ALA:H	1.84	0.42
4:CD:62:ARG:HG3	4:CD:72:PHE:CG	2.54	0.42
7:CG:5:ARG:NE	7:CG:5:ARG:HA	2.34	0.42
7:CG:46:ALA:HA	7:CG:121:ALA:HB2	2.00	0.42
11:CK:126:LYS:O	11:CK:127:ARG:CB	2.66	0.42
21:CU:6:VAL:C	21:CU:7:ARG:HG2	2.42	0.42
22:DA:16:C:C3'	48:D0:11:SER:HG	2.30	0.42
22:DA:416:U:H2'	22:DA:417:C:O4'	2.18	0.42
22:DA:439:A:H2'	22:DA:440:C:O4'	2.18	0.42
22:DA:813:U:C2	22:DA:814:C:C5	3.07	0.42
22:DA:995:C:C4	38:DQ:57:PHE:CZ	3.07	0.42
22:DA:1171:G:C2	22:DA:1179:G:C6	3.07	0.42
22:DA:1362:C:O2'	22:DA:1363:C:H5'	2.18	0.42
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.58	0.42
22:DA:1791:A:C8	22:DA:1792:G:C8	3.06	0.42
22:DA:2138:G:C2	22:DA:2154:A:N3	2.86	0.42
22:DA:2301:C:C2	22:DA:2316:G:N2	2.87	0.42
22:DA:2323:G:C6	22:DA:2324:U:C4	3.07	0.42
22:DA:2549:G:C2'	22:DA:2550:G:H5'	2.49	0.42
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.34	0.42
23:DB:109:A:C6	23:DB:110:C:N3	2.87	0.42
25:DD:148:GLN:HB2	25:DD:152:PRO:HG2	2.01	0.42
26:DE:61:ARG:O	26:DE:62:GLN:C	2.61	0.42
30:DI:39:CYS:HA	30:DI:42:PHE:HB3	2.00	0.42
30:DI:89:GLY:CA	30:DI:136:MET:HE3	2.49	0.42
37:DP:103:ARG:HG2	37:DP:107:ALA:CB	2.49	0.42
39:DR:52:PRO:O	39:DR:53:PHE:HB2	2.19	0.42
40:DS:17:VAL:HG12	40:DS:76:VAL:HG21	2.00	0.42
40:DS:85:ILE:CG2	40:DS:86:MET:N	2.82	0.42
51:D3:45:ARG:N	51:D3:46:PRO:HD2	2.33	0.42
1:AA:104:G:N3	1:AA:105:G:C8	2.87	0.42
1:AA:604:G:C6	1:AA:605:U:N3	2.87	0.42
1:AA:903:G:H2'	1:AA:904:U:H6	1.84	0.42
1:AA:1118:U:C1'	1:AA:1179:A:C4	3.02	0.42
4:AD:75:TYR:OH	4:AD:97:ARG:NH1	2.50	0.42
4:AD:76:TYR:CD2	4:AD:76:TYR:C	2.97	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:85:ASN:O	4:AD:86:THR:C	2.62	0.42
5:AE:140:THR:H	5:AE:140:THR:HG1	1.52	0.42
6:AF:42:TRP:HZ2	6:AF:61:LEU:HD22	1.84	0.42
8:AH:8:ALA:HB2	8:AH:77:ARG:HD2	2.00	0.42
8:AH:30:SER:O	8:AH:32:LEU:N	2.53	0.42
9:AI:50:GLN:CD	9:AI:103:PHE:CZ	2.97	0.42
10:AJ:15:HIS:C	10:AJ:17:LEU:N	2.77	0.42
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.49	0.42
11:AK:53:ARG:O	11:AK:56:ARG:HG3	2.19	0.42
12:AL:51:LYS:N	12:AL:51:LYS:HD3	2.33	0.42
13:AM:69:LEU:HG	13:AM:73:ILE:HD11	2.01	0.42
16:AP:44:SER:O	16:AP:46:LYS:HD2	2.20	0.42
17:AQ:17:MET:HB2	17:AQ:20:SER:HB3	2.00	0.42
22:BA:207:A:O2'	22:BA:799:G:H4'	2.19	0.42
22:BA:271:G:C4'	22:BA:272:A:OP1	2.67	0.42
22:BA:477:A:C6	22:BA:478:A:C6	3.07	0.42
22:BA:685:A:H1'	22:BA:688:U:O4	2.19	0.42
22:BA:1016:G:C2	22:BA:1147:A:C2	3.07	0.42
22:BA:1439:A:N3	22:BA:1553:A:C6	2.87	0.42
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.54	0.42
22:BA:1836:C:C2'	22:BA:1837:C:H5'	2.49	0.42
22:BA:1935:G:O2'	22:BA:1936:A:H5'	2.18	0.42
22:BA:2469:A:H4'	34:BM:55:ARG:HH12	1.83	0.42
22:BA:2685:G:O2'	22:BA:2686:G:H5'	2.19	0.42
23:BB:96:G:C2'	23:BB:97:C:H5'	2.48	0.42
33:BL:109:LYS:HG2	33:BL:126:ARG:CB	2.50	0.42
41:BT:48:GLN:O	41:BT:52:GLU:HA	2.18	0.42
41:BT:69:ARG:HB3	41:BT:74:ILE:HG22	2.01	0.42
53:B5:204:GLY:O	53:B5:205:ALA:HB2	2.18	0.42
1:CA:68:G:O4'	1:CA:171:A:H1'	2.19	0.42
1:CA:167:A:C2'	1:CA:168:G:O5'	2.67	0.42
1:CA:205:A:N6	1:CA:213:G:O6	2.52	0.42
1:CA:939:G:P	7:CG:95:ARG:HH22	2.43	0.42
1:CA:1195:C:H5"	1:CA:1196:A:OP2	2.19	0.42
1:CA:1503:A:C2	1:CA:1531:A:H2	2.36	0.42
2:CB:110:SER:C	2:CB:112:LYS:N	2.76	0.42
2:CB:151:ILE:O	2:CB:151:ILE:HG23	2.18	0.42
3:CC:101:ILE:O	3:CC:101:ILE:CG2	2.67	0.42
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.66	0.42
4:CD:152:GLN:O	4:CD:153:SER:C	2.62	0.42
7:CG:26:PHE:HB2	7:CG:101:MET:SD	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:12:ARG:CZ	9:CI:107:ASP:CG	2.92	0.42
10:CJ:27:GLU:O	10:CJ:27:GLU:CG	2.67	0.42
12:CL:87:VAL:HB	12:CL:93:VAL:HG21	1.99	0.42
22:DA:308:G:C6	22:DA:309:A:C6	3.07	0.42
22:DA:532:A:H4'	22:DA:533:G:C8	2.54	0.42
22:DA:589:U:C2	22:DA:590:A:N7	2.88	0.42
22:DA:764:A:C2	22:DA:781:A:C2	3.07	0.42
22:DA:1262:A:N3	22:DA:1262:A:H2'	2.35	0.42
22:DA:1403:A:H2'	22:DA:1404:C:C6	2.55	0.42
22:DA:1566:A:N3	24:DC:213:TRP:CB	2.81	0.42
22:DA:1596:A:C6	22:DA:1597:A:C6	3.07	0.42
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.81	0.42
22:DA:2584:U:H3'	22:DA:2585:U:H5"	2.02	0.42
23:DB:61:G:C6	23:DB:62:C:C4	3.07	0.42
28:DG:41:VAL:HG22	28:DG:64:GLN:HB3	2.01	0.42
28:DG:61:GLY:O	28:DG:62:TRP:C	2.62	0.42
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.18	0.42
30:DI:103:ARG:O	30:DI:107:GLN:N	2.49	0.42
33:DL:101:ILE:HD12	33:DL:105:ILE:HG21	2.01	0.42
37:DP:92:VAL:CG1	37:DP:110:ILE:HG22	2.49	0.42
40:DS:13:SER:O	40:DS:14:ALA:C	2.60	0.42
48:D0:25:VAL:HG13	48:D0:26:THR:H	1.85	0.42
49:D1:5:ILE:HG22	49:D1:28:ARG:HD3	2.00	0.42
1:AA:192:A:H2'	1:AA:193:C:C6	2.54	0.42
1:AA:666:G:C5	1:AA:741:G:C6	3.07	0.42
1:AA:918:A:H2'	1:AA:919:A:C8	2.54	0.42
1:AA:974:A:P	14:AN:69:ARG:HH12	2.42	0.42
1:AA:1329:A:OP1	13:AM:26:GLY:N	2.49	0.42
1:AA:1468:A:H2'	1:AA:1469:C:O4'	2.19	0.42
1:AA:1505:G:P	57:AA:1868:HOH:O	2.76	0.42
4:AD:30:THR:O	4:AD:31:LYS:C	2.61	0.42
4:AD:150:LYS:O	4:AD:152:GLN:N	2.52	0.42
5:AE:117:VAL:HG23	5:AE:118:ALA:N	2.34	0.42
8:AH:34:VAL:O	8:AH:36:ILE:N	2.52	0.42
9:AI:30:ILE:HB	9:AI:65:ILE:HD11	2.01	0.42
9:AI:97:GLU:CD	9:AI:97:GLU:H	2.27	0.42
19:AS:3:ARG:O	19:AS:4:SER:HB2	2.19	0.42
22:BA:228:C:N4	22:BA:2407:A:N3	2.66	0.42
22:BA:328:U:H2'	22:BA:329:G:OP1	2.19	0.42
22:BA:418:C:H2'	22:BA:419:U:O4'	2.19	0.42
22:BA:420:C:O2'	22:BA:421:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:464:U:O2	22:BA:464:U:H2'	2.18	0.42
22:BA:475:C:N3	22:BA:481:G:C6	2.87	0.42
22:BA:820:A:H2'	22:BA:821:A:O4'	2.19	0.42
22:BA:1022:G:O6	31:BJ:68:LYS:CE	2.67	0.42
22:BA:1098:A:C6	22:BA:1099:G:C6	3.07	0.42
22:BA:1352:U:O2'	22:BA:1570:A:N3	2.47	0.42
22:BA:1361:G:C6	22:BA:1362:C:N4	2.87	0.42
22:BA:1803:A:N1	22:BA:1822:C:O2'	2.47	0.42
22:BA:1915:U:H2'	22:BA:1916:A:O4'	2.19	0.42
22:BA:2298:A:C6	22:BA:2321:U:C4	3.08	0.42
22:BA:2529:G:OP1	28:BG:172:LYS:NZ	2.48	0.42
22:BA:2575:C:O2'	22:BA:2578:G:N7	2.45	0.42
22:BA:2717:C:H2'	22:BA:2718:G:O4'	2.19	0.42
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.34	0.42
23:BB:50:A:H2'	23:BB:51:G:O5'	2.19	0.42
24:BC:161:TYR:O	24:BC:161:TYR:CD1	2.73	0.42
28:BG:54:PRO:HG3	28:BG:62:TRP:NE1	2.34	0.42
29:BH:123:ARG:NH2	1:CA:367:U:H5'	2.33	0.42
35:BN:29:VAL:O	35:BN:30:ARG:C	2.61	0.42
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	2.01	0.42
53:B5:100:ILE:HG22	53:B5:104:ILE:CB	2.49	0.42
1:CA:797:C:O2'	1:CA:798:U:H5'	2.19	0.42
1:CA:1002:G:H2'	1:CA:1003:G:O4'	2.19	0.42
1:CA:1031:C:H4'	1:CA:1032:G:C2	2.53	0.42
1:CA:1081:A:H2'	1:CA:1082:A:O4'	2.19	0.42
1:CA:1177:G:C5	1:CA:1178:G:C5	3.07	0.42
1:CA:1377:A:C4	7:CG:7:ILE:CD1	3.03	0.42
2:CB:34:ALA:O	2:CB:35:ARG:O	2.38	0.42
2:CB:120:GLN:HG2	2:CB:120:GLN:O	2.20	0.42
3:CC:36:ASP:C	3:CC:38:LYS:H	2.26	0.42
4:CD:26:ARG:HD2	4:CD:31:LYS:HE3	2.01	0.42
4:CD:69:GLU:O	4:CD:70:ARG:C	2.61	0.42
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.92	0.42
9:CI:83:ILE:O	9:CI:87:LEU:HG	2.20	0.42
13:CM:60:VAL:CG2	13:CM:65:VAL:HG21	2.50	0.42
15:CO:29:VAL:HG13	15:CO:63:ARG:HG3	2.00	0.42
17:CQ:46:VAL:CG2	17:CQ:61:ILE:CD1	2.98	0.42
18:CR:62:ALA:O	18:CR:63:ARG:C	2.60	0.42
22:DA:56:A:C6	22:DA:57:C:N3	2.87	0.42
22:DA:251:A:H4'	33:DL:47:ARG:NH2	2.35	0.42
22:DA:277:G:C2'	22:DA:361:G:O6	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:404:A:H1'	22:DA:405:U:OP2	2.19	0.42
22:DA:513:A:C2	22:DA:514:A:N7	2.87	0.42
22:DA:568:U:H2'	22:DA:570:G:OP2	2.19	0.42
22:DA:988:A:P	47:DZ:12:SER:HB3	2.59	0.42
22:DA:1087:G:C2	22:DA:1089:A:C2	3.07	0.42
22:DA:1252:G:H5"	57:DA:3282:HOH:O	2.17	0.42
22:DA:1281:G:H2'	22:DA:1282:U:C6	2.54	0.42
22:DA:1855:U:C6	22:DA:1856:U:C5	3.08	0.42
22:DA:1857:G:C2	22:DA:1884:G:C4	3.08	0.42
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.53	0.42
22:DA:2370:G:C6	22:DA:2371:G:C6	3.08	0.42
22:DA:2540:C:C2	22:DA:2541:A:C8	3.07	0.42
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.55	0.42
23:DB:68:C:H2'	23:DB:69:G:O4'	2.19	0.42
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.20	0.42
26:DE:81:GLY:HA2	57:DE:301:HOH:O	2.18	0.42
27:DF:104:ILE:O	27:DF:109:PRO:HD3	2.18	0.42
33:DL:68:SER:O	33:DL:69:ARG:HG3	2.19	0.42
34:DM:67:VAL:HG11	34:DM:96:ILE:CD1	2.49	0.42
35:DN:56:LYS:NZ	35:DN:87:PHE:HB3	2.34	0.42
35:DN:83:LEU:HD23	35:DN:86:ARG:NH2	2.35	0.42
37:DP:99:TYR:CE2	37:DP:100:LEU:HD21	2.54	0.42
38:DQ:32:TYR:O	38:DQ:33:ARG:C	2.62	0.42
42:DU:3:ALA:O	42:DU:6:ARG:NH1	2.52	0.42
42:DU:6:ARG:O	42:DU:7:ARG:C	2.63	0.42
44:DW:19:LYS:O	44:DW:20:ARG:C	2.62	0.42
45:DX:18:ARG:HD2	45:DX:18:ARG:HA	1.84	0.42
1:AA:35:G:H2'	1:AA:36:C:C6	2.54	0.42
1:AA:219:U:H2'	1:AA:220:G:H8	1.85	0.42
1:AA:343:U:H2'	1:AA:345:C:C5	2.54	0.42
1:AA:459:A:H2'	1:AA:460:A:C8	2.55	0.42
1:AA:601:G:H2'	1:AA:602:A:C8	2.54	0.42
1:AA:615:G:C2	1:AA:616:G:C8	3.08	0.42
1:AA:714:G:H2'	1:AA:715:A:C8	2.54	0.42
1:AA:828:U:C4	1:AA:859:G:C4	3.07	0.42
1:AA:947:G:C6	1:AA:948:C:N3	2.88	0.42
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.54	0.42
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.31	0.42
2:AB:19:GLN:O	2:AB:38:VAL:HG23	2.20	0.42
3:AC:96:GLY:C	3:AC:97:VAL:CG1	2.92	0.42
4:AD:170:TRP:O	4:AD:183:LYS:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:28:THR:HG22	10:AJ:28:THR:O	2.20	0.42
12:AL:43:LYS:HG3	12:AL:44:LYS:HD3	2.02	0.42
14:AN:21:PHE:C	14:AN:23:LYS:H	2.28	0.42
14:AN:46:LEU:CG	14:AN:47:LYS:N	2.82	0.42
16:AP:56:ARG:O	16:AP:57:ILE:C	2.63	0.42
19:AS:29:LYS:C	19:AS:30:PRO:O	2.62	0.42
20:AT:19:LYS:O	20:AT:22:ALA:HB3	2.19	0.42
22:BA:216:A:C8	22:BA:432:A:C6	3.07	0.42
22:BA:372:G:P	45:BX:62:LYS:NZ	2.93	0.42
22:BA:460:A:H2'	22:BA:461:C:O4'	2.19	0.42
22:BA:644:A:C2	22:BA:2369:A:H1'	2.54	0.42
22:BA:830:G:H4'	22:BA:831:G:OP2	2.20	0.42
22:BA:880:G:N2	22:BA:898:C:O2	2.52	0.42
22:BA:959:A:C6	22:BA:960:A:N1	2.87	0.42
22:BA:1007:C:OP1	31:BJ:39:LYS:HD2	2.20	0.42
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.55	0.42
22:BA:1183:U:H2'	22:BA:1184:U:C6	2.54	0.42
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.42	0.42
22:BA:1827:U:H2'	22:BA:1828:G:O5'	2.20	0.42
22:BA:1834:U:H4'	22:BA:1969:A:C6	2.54	0.42
22:BA:2590:A:C2	22:BA:2605:U:C2	3.08	0.42
24:BC:91:ILE:CD1	24:BC:103:TYR:CD1	3.00	0.42
25:BD:39:ASP:CG	25:BD:40:LEU:H	2.26	0.42
25:BD:103:ASP:CG	25:BD:104:VAL:N	2.76	0.42
26:BE:77:ILE:O	26:BE:77:ILE:CG2	2.66	0.42
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.84	0.42
30:BI:75:PRO:HB2	30:BI:78:VAL:HG13	2.01	0.42
53:B5:73:VAL:HB	53:B5:75:VAL:HG23	2.00	0.42
53:B5:79:ALA:HB3	53:B5:95:VAL:HG11	2.00	0.42
1:CA:6:G:O2'	1:CA:298:A:H1'	2.19	0.42
1:CA:392:C:C2	1:CA:393:A:C8	3.07	0.42
1:CA:686:U:C2	1:CA:687:A:N7	2.87	0.42
1:CA:826:C:H2'	1:CA:827:U:C6	2.54	0.42
1:CA:976:G:P	1:CA:1358:U:O2'	2.77	0.42
1:CA:1397:C:O2'	1:CA:1398:A:OP1	2.29	0.42
1:CA:1479:C:C2	1:CA:1480:A:C8	3.06	0.42
3:CC:30:ALA:HB1	14:CN:65:ARG:NH2	2.34	0.42
4:CD:17:THR:CG2	4:CD:18:ASP:N	2.80	0.42
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.82	0.42
11:CK:59:THR:HA	11:CK:91:PRO:HB3	2.01	0.42
11:CK:88:GLY:N	11:CK:114:THR:HG22	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.48	0.42
22:DA:291:G:O2'	22:DA:292:U:H5'	2.19	0.42
22:DA:575:A:H1'	22:DA:2500:U:OP1	2.19	0.42
22:DA:600:G:H5"	26:DE:27:LEU:HD22	2.02	0.42
22:DA:605:G:N7	22:DA:606:U:C5	2.88	0.42
22:DA:621:A:H2'	22:DA:622:G:O4'	2.19	0.42
22:DA:629:G:O6	22:DA:630:G:C6	2.72	0.42
22:DA:783:A:C5	22:DA:785:G:H1'	2.53	0.42
22:DA:1061:U:H3'	22:DA:1062:G:C5'	2.50	0.42
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	2.02	0.42
22:DA:1358:G:O6	22:DA:1371:G:C8	2.72	0.42
22:DA:1360:G:N1	22:DA:1361:G:H1'	2.33	0.42
22:DA:1361:G:C5	22:DA:1371:G:N2	2.87	0.42
22:DA:1492:G:C5	22:DA:1496:A:N6	2.87	0.42
22:DA:1509:A:C4	22:DA:1510:G:N7	2.87	0.42
22:DA:1622:G:H2'	22:DA:1623:G:O4'	2.20	0.42
22:DA:2063:C:O2	22:DA:2063:C:H2'	2.18	0.42
22:DA:2209:G:C6	22:DA:2210:U:C4	3.08	0.42
22:DA:2285:C:O4'	22:DA:2288:A:C2	2.72	0.42
22:DA:2310:C:C4	27:DF:77:PHE:CZ	3.07	0.42
22:DA:2444:G:OP2	26:DE:63:LYS:HE2	2.20	0.42
22:DA:2722:G:H4'	35:DN:4:ARG:HB2	2.01	0.42
24:DC:93:LEU:HD13	24:DC:103:TYR:CE1	2.54	0.42
30:DI:103:ARG:O	30:DI:107:GLN:HB2	2.19	0.42
40:DS:5:ALA:O	40:DS:50:VAL:CG1	2.67	0.42
40:DS:27:LYS:HB2	40:DS:32:ALA:HB2	2.02	0.42
42:DU:7:ARG:HD3	42:DU:8:ASP:N	2.34	0.42
43:DV:6:ALA:CB	43:DV:42:LEU:HD22	2.49	0.42
45:DX:58:VAL:CG1	45:DX:59:ILE:N	2.82	0.42
49:D1:9:ILE:HG13	49:D1:10:LYS:N	2.33	0.42
1:AA:64:G:N7	1:AA:99:C:C4	2.88	0.42
1:AA:102:G:N1	1:AA:103:U:C4	2.87	0.42
1:AA:157:U:O2	1:AA:165:G:C6	2.72	0.42
1:AA:203:G:O2'	1:AA:465:A:N1	2.51	0.42
1:AA:232:G:H2'	1:AA:233:C:O4'	2.18	0.42
1:AA:558:G:C4	1:AA:559:A:C2	3.07	0.42
1:AA:678:U:H1'	1:AA:777:A:O3'	2.19	0.42
1:AA:760:G:C8	1:AA:761:G:C8	3.08	0.42
1:AA:1059:C:C2	1:AA:1060:U:C5	3.06	0.42
1:AA:1327:C:C2'	1:AA:1328:C:H5'	2.50	0.42
4:AD:150:LYS:O	4:AD:152:GLN:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:153:SER:OG	4:AD:154:ARG:N	2.52	0.42
7:AG:40:GLU:O	7:AG:43:VAL:HG23	2.19	0.42
8:AH:59:LEU:HD13	8:AH:60:GLU:N	2.35	0.42
14:AN:43:ASN:O	14:AN:44:ALA:C	2.61	0.42
16:AP:19:VAL:HG13	16:AP:37:GLY:CA	2.49	0.42
16:AP:57:ILE:O	16:AP:61:VAL:HG23	2.20	0.42
20:AT:7:ALA:HB1	20:AT:10:ARG:HB2	2.02	0.42
20:AT:33:LYS:O	20:AT:35:VAL:N	2.52	0.42
22:BA:64:A:C5	22:BA:65:U:C4	3.08	0.42
22:BA:289:G:H2'	22:BA:290:U:O4'	2.20	0.42
22:BA:404:A:C8	22:BA:406:G:C6	3.07	0.42
22:BA:528:A:C2	22:BA:2042:A:H2'	2.54	0.42
22:BA:553:G:N7	22:BA:554:U:C5	2.87	0.42
22:BA:558:U:OP1	31:BJ:113:PRO:HD2	2.19	0.42
22:BA:638:G:C5	22:BA:651:G:C2	3.07	0.42
22:BA:1090:A:H2'	22:BA:1091:G:C5'	2.47	0.42
22:BA:1196:C:H1'	22:BA:1226:A:C4	2.54	0.42
22:BA:1385:A:C4	22:BA:1386:C:C5	3.08	0.42
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.19	0.42
22:BA:2346:A:H3'	22:BA:2347:C:H5"	2.01	0.42
25:BD:106:LYS:HA	25:BD:175:LEU:O	2.20	0.42
28:BG:37:LEU:HD13	28:BG:68:ALA:HB1	2.01	0.42
30:BI:18:ALA:HB2	30:BI:42:PHE:CZ	2.54	0.42
33:BL:91:ASP:O	33:BL:92:LEU:C	2.62	0.42
51:B3:39:LYS:HA	51:B3:42:ARG:NH2	2.34	0.42
1:CA:182:A:C5	1:CA:184:G:C5	3.07	0.42
1:CA:543:U:O2'	1:CA:544:G:H5'	2.19	0.42
1:CA:674:G:OP1	6:CF:86:ARG:NH2	2.39	0.42
1:CA:728:A:N6	1:CA:729:A:N6	2.67	0.42
1:CA:881:G:H2'	1:CA:882:C:O4'	2.18	0.42
1:CA:951:G:C5	1:CA:952:U:C4	3.08	0.42
1:CA:972:C:H4'	10:CJ:59:LYS:CG	2.50	0.42
1:CA:1159:U:C4	1:CA:1182:G:C5	3.07	0.42
1:CA:1322:C:O2	1:CA:1322:C:O4'	2.36	0.42
3:CC:165:THR:O	3:CC:166:GLU:HB3	2.20	0.42
4:CD:48:LEU:CD2	4:CD:52:GLY:C	2.93	0.42
4:CD:122:ALA:C	4:CD:123:ILE:HG12	2.44	0.42
4:CD:150:LYS:O	4:CD:152:GLN:OE1	2.37	0.42
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.34	0.42
6:CF:80:PHE:CD1	6:CF:80:PHE:C	2.95	0.42
8:CH:92:LEU:HD22	8:CH:113:ASP:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:37:ARG:O	10:CJ:38:GLY:O	2.38	0.42
11:CK:31:ILE:HB	11:CK:46:THR:HG22	2.02	0.42
11:CK:77:TYR:O	11:CK:78:GLY:C	2.62	0.42
13:CM:22:ILE:HG22	13:CM:23:TYR:N	2.34	0.42
20:CT:73:ALA:O	20:CT:77:ALA:N	2.49	0.42
22:DA:121:G:H1'	22:DA:131:A:C2	2.55	0.42
22:DA:430:A:H2'	22:DA:431:U:H5'	2.00	0.42
22:DA:621:A:OP2	33:DL:99:ASN:OD1	2.38	0.42
22:DA:636:G:C6	33:DL:111:ILE:HD11	2.55	0.42
22:DA:875:G:H2'	22:DA:876:C:O4'	2.19	0.42
22:DA:900:A:C5	22:DA:901:C:C6	3.07	0.42
22:DA:922:C:H2'	22:DA:923:G:C8	2.54	0.42
22:DA:1232:G:H2'	22:DA:1233:C:C6	2.55	0.42
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.88	0.42
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.54	0.42
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.55	0.42
22:DA:1490:A:H2'	22:DA:1490:A:N3	2.35	0.42
22:DA:1619:G:N2	22:DA:1620:G:H1'	2.34	0.42
22:DA:1665:A:N6	22:DA:1666:G:C6	2.87	0.42
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.54	0.42
22:DA:2093:G:O2'	29:DH:25:TYR:HB2	2.19	0.42
22:DA:2128:G:O6	22:DA:2160:C:C4	2.72	0.42
22:DA:2164:C:O2	22:DA:2164:C:O2'	2.37	0.42
22:DA:2195:U:N3	22:DA:2196:C:C5	2.88	0.42
22:DA:2208:C:C2	22:DA:2217:G:N2	2.87	0.42
22:DA:2209:G:N2	22:DA:2216:G:N3	2.67	0.42
22:DA:2745:C:O2'	28:DG:139:GLN:O	2.37	0.42
24:DC:87:ARG:HB3	24:DC:87:ARG:CZ	2.48	0.42
24:DC:158:ALA:HA	24:DC:195:VAL:HG22	2.02	0.42
25:DD:14:ILE:HG12	25:DD:24:VAL:HG21	2.01	0.42
26:DE:52:VAL:CG2	26:DE:81:GLY:HA2	2.49	0.42
32:DK:63:VAL:O	32:DK:64:ARG:CG	2.68	0.42
33:DL:81:ASP:O	33:DL:82:LEU:CB	2.66	0.42
39:DR:39:LEU:O	39:DR:49:ILE:HG12	2.20	0.42
1:AA:155:A:N1	1:AA:167:A:C2	2.87	0.42
1:AA:292:G:N7	1:AA:293:G:H1'	2.34	0.42
1:AA:451:A:OP2	16:AP:70:ARG:NH2	2.51	0.42
1:AA:475:C:H2'	1:AA:476:U:O4'	2.19	0.42
1:AA:785:G:C2'	1:AA:786:G:H5'	2.50	0.42
1:AA:992:U:O2	1:AA:1043:G:N7	2.52	0.42
1:AA:1160:G:N3	1:AA:1161:C:C6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.70	0.42
1:AA:1288:A:N6	1:AA:1289:A:C6	2.88	0.42
1:AA:1462:C:C4	1:AA:1463:U:C5	3.08	0.42
2:AB:35:ARG:O	2:AB:36:ASN:C	2.62	0.42
2:AB:70:VAL:HG21	2:AB:96:TRP:CD1	2.54	0.42
3:AC:60:PRO:O	3:AC:61:ALA:O	2.38	0.42
4:AD:38:PRO:HD2	4:AD:42:GLY:CA	2.50	0.42
5:AE:46:VAL:HG11	5:AE:118:ALA:HB2	2.01	0.42
6:AF:35:LYS:HD3	6:AF:35:LYS:N	2.35	0.42
6:AF:99:ALA:O	6:AF:100:SER:HB2	2.20	0.42
7:AG:120:LEU:O	7:AG:124:LEU:HD23	2.19	0.42
9:AI:11:ARG:HB2	9:AI:15:SER:O	2.20	0.42
9:AI:57:MET:SD	9:AI:57:MET:C	3.03	0.42
11:AK:31:ILE:HB	11:AK:46:THR:HG22	2.00	0.42
11:AK:86:VAL:HG12	11:AK:93:ARG:NH1	2.35	0.42
11:AK:110:ILE:O	21:AU:6:VAL:HG22	2.18	0.42
11:AK:126:LYS:H	11:AK:126:LYS:HD3	1.83	0.42
14:AN:30:ILE:C	14:AN:32:SER:N	2.76	0.42
22:BA:4:U:O2	22:BA:2900:A:C2	2.72	0.42
22:BA:11:C:C2'	22:BA:12:U:H5'	2.49	0.42
22:BA:118:A:N3	22:BA:178:G:H1'	2.33	0.42
22:BA:661:A:H2'	22:BA:662:G:O4'	2.20	0.42
22:BA:1301:A:C4	22:BA:1303:G:C8	3.08	0.42
22:BA:1315:C:C2	22:BA:1338:G:N2	2.88	0.42
22:BA:1936:A:C6	22:BA:1945:G:C4	3.07	0.42
22:BA:2311:A:C5	27:BF:77:PHE:HB3	2.54	0.42
22:BA:2346:A:C5	22:BA:2383:G:C2	3.08	0.42
22:BA:2415:G:C6	22:BA:2416:C:C4	3.07	0.42
22:BA:2458:G:C4	22:BA:2490:G:C2	3.07	0.42
22:BA:2468:A:C2	22:BA:2481:G:C2	3.07	0.42
22:BA:2582:G:O2'	22:BA:2583:G:H5'	2.20	0.42
22:BA:2598:A:OP1	24:BC:235:GLY:N	2.53	0.42
23:BB:59:A:H2'	23:BB:60:C:O4'	2.20	0.42
24:BC:62:TYR:HD1	24:BC:86:ASN:OD1	2.01	0.42
25:BD:13:ARG:HD3	25:BD:21:SER:OG	2.19	0.42
25:BD:66:GLY:O	25:BD:69:ALA:N	2.52	0.42
25:BD:69:ALA:O	25:BD:72:GLY:N	2.51	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
33:BL:23:ILE:HD13	39:BR:84:ARG:HG2	2.00	0.42
33:BL:37:GLY:O	33:BL:41:ARG:HG2	2.19	0.42
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:2:ILE:HG12	41:BT:7:LEU:HD11	2.01	0.42
48:B0:17:ARG:O	48:B0:19:HIS:N	2.53	0.42
53:B5:66:PRO:CG	53:B5:194:ILE:CB	2.97	0.42
1:CA:29:U:H4'	1:CA:295:C:O3'	2.19	0.42
1:CA:32:A:N3	1:CA:33:A:C8	2.88	0.42
1:CA:237:G:C5	1:CA:238:A:N7	2.86	0.42
1:CA:302:G:C6	1:CA:303:A:C5	3.08	0.42
1:CA:441:A:H5"	1:CA:442:G:OP2	2.19	0.42
1:CA:485:U:O2	1:CA:485:U:O4'	2.37	0.42
1:CA:623:C:C4	1:CA:624:C:C5	3.07	0.42
1:CA:685:G:C2	1:CA:686:U:C4	3.07	0.42
1:CA:834:U:H2'	1:CA:835:U:C6	2.54	0.42
1:CA:997:U:H2'	1:CA:998:C:O4'	2.20	0.42
1:CA:1004:A:C6	1:CA:1005:A:N1	2.88	0.42
1:CA:1007:U:H3'	1:CA:1008:U:H5"	2.02	0.42
1:CA:1299:A:N3	1:CA:1299:A:H2'	2.34	0.42
2:CB:23:TRP:CD1	2:CB:23:TRP:O	2.73	0.42
4:CD:85:ASN:C	4:CD:85:ASN:OD1	2.62	0.42
6:CF:16:GLU:C	6:CF:18:VAL:H	2.28	0.42
11:CK:28:ASN:O	11:CK:57:LYS:HE3	2.19	0.42
13:CM:33:ILE:HG23	13:CM:59:GLU:CB	2.50	0.42
14:CN:10:GLU:O	14:CN:14:VAL:HG23	2.19	0.42
14:CN:12:LYS:O	14:CN:14:VAL:N	2.53	0.42
17:CQ:57:ASP:OD1	17:CQ:57:ASP:N	2.51	0.42
22:DA:11:C:H2'	22:DA:12:U:H5'	2.01	0.42
22:DA:46:G:N2	22:DA:47:C:C2	2.88	0.42
22:DA:136:G:C2	22:DA:144:A:C6	3.07	0.42
22:DA:187:G:N1	22:DA:210:C:C2	2.88	0.42
22:DA:677:A:C2	22:DA:802:A:C2	3.07	0.42
22:DA:955:U:O4	22:DA:956:G:O6	2.37	0.42
22:DA:1127:A:C3'	22:DA:1128:G:H5"	2.50	0.42
22:DA:1135:C:H5'	22:DA:1136:G:OP2	2.20	0.42
22:DA:1858:A:C2	22:DA:1859:U:H1'	2.54	0.42
22:DA:2100:G:C5	22:DA:2190:G:C6	3.07	0.42
22:DA:2756:U:H4'	22:DA:2757:A:OP1	2.18	0.42
22:DA:2838:G:C6	22:DA:2839:G:C5	3.08	0.42
23:DB:39:A:H2'	23:DB:40:U:C5	2.55	0.42
24:DC:148:PRO:HD2	24:DC:185:GLU:OE2	2.19	0.42
25:DD:130:GLN:O	25:DD:131:ASP:C	2.61	0.42
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.85	0.42
26:DE:130:LYS:HB2	26:DE:133:LEU:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:60:ILE:O	27:DF:102:ARG:NH2	2.52	0.42
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.82	0.42
28:DG:139:GLN:C	28:DG:139:GLN:CD	2.87	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
30:DI:80:LEU:HD23	30:DI:84:ALA:HB1	2.00	0.42
37:DP:65:SER:O	37:DP:67:GLY:N	2.53	0.42
45:DX:33:LEU:CD2	45:DX:50:ARG:CZ	2.98	0.42
46:DY:9:LYS:O	46:DY:12:GLU:HG3	2.20	0.42
49:D1:15:ALA:O	49:D1:16:GLY:C	2.63	0.42
1:AA:438:U:C2	1:AA:494:G:N1	2.87	0.42
1:AA:705:G:N7	1:AA:706:A:N7	2.67	0.42
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.54	0.42
2:AB:28:LYS:HB3	2:AB:29:PRO:HD3	2.02	0.42
4:AD:48:LEU:HD21	4:AD:53:VAL:HG12	2.02	0.42
4:AD:150:LYS:HE2	4:AD:177:LYS:O	2.20	0.42
5:AE:75:ALA:O	5:AE:82:GLN:NE2	2.52	0.42
5:AE:81:LEU:HD23	5:AE:123:VAL:CG1	2.50	0.42
6:AF:3:HIS:O	6:AF:4:TYR:CG	2.73	0.42
10:AJ:29:ALA:HA	10:AJ:32:THR:CG2	2.49	0.42
10:AJ:80:THR:O	10:AJ:84:VAL:N	2.50	0.42
12:AL:55:VAL:HG21	12:AL:80:ILE:HD11	2.01	0.42
22:BA:27:G:N2	22:BA:512:G:H1'	2.34	0.42
22:BA:28:A:C5	22:BA:29:U:C5	3.07	0.42
22:BA:222:A:C5	22:BA:224:U:C2	3.07	0.42
22:BA:236:C:O2'	22:BA:237:C:H5'	2.20	0.42
22:BA:735:A:C8	22:BA:736:C:C5	3.08	0.42
22:BA:851:C:C2'	22:BA:852:U:O5'	2.68	0.42
22:BA:1184:U:H2'	22:BA:1185:G:O5'	2.20	0.42
22:BA:1450:G:O6	22:BA:1451:C:N4	2.53	0.42
22:BA:1583:A:O2'	22:BA:1584:U:O5'	2.36	0.42
22:BA:2129:C:H2'	22:BA:2130:U:C6	2.54	0.42
22:BA:2136:G:H2'	22:BA:2137:U:C6	2.54	0.42
22:BA:2219:U:H2'	22:BA:2220:U:O5'	2.20	0.42
22:BA:2296:U:C2	22:BA:2333:A:C2	3.07	0.42
22:BA:2297:A:C2	22:BA:2321:U:H5	2.37	0.42
22:BA:2473:U:O2	22:BA:2473:U:H2'	2.19	0.42
22:BA:2880:C:C2	22:BA:2881:U:C5	3.08	0.42
23:BB:24:G:N7	23:BB:56:G:H2'	2.34	0.42
23:BB:96:G:O2'	23:BB:97:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:186:ALA:C	24:BC:188:CYS:H	2.27	0.42
27:BF:31:VAL:HG23	27:BF:96:MET:SD	2.60	0.42
29:BH:116:ARG:HB3	29:BH:131:SER:O	2.20	0.42
29:BH:118:PRO:O	29:BH:119:ASN:CB	2.68	0.42
30:BI:82:LYS:O	30:BI:82:LYS:NZ	2.46	0.42
31:BJ:80:HIS:O	31:BJ:83:GLY:N	2.50	0.42
31:BJ:112:GLY:O	31:BJ:116:ARG:HG3	2.20	0.42
32:BK:108:ARG:O	32:BK:109:SER:C	2.62	0.42
33:BL:81:ASP:CG	33:BL:100:ILE:HD13	2.44	0.42
35:BN:37:THR:HG22	35:BN:110:MET:HE1	2.01	0.42
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.20	0.42
39:BR:68:ARG:NH1	39:BR:90:ARG:HD3	2.35	0.42
1:CA:296:U:C2	1:CA:297:G:C8	3.07	0.42
1:CA:328:C:O2	1:CA:328:C:H2'	2.19	0.42
1:CA:402:G:H4'	1:CA:620:C:O2	2.20	0.42
1:CA:975:A:N1	1:CA:1366:C:O2'	2.52	0.42
1:CA:1394:A:H4'	1:CA:1395:C:OP2	2.19	0.42
1:CA:1435:G:O6	1:CA:1465:A:N6	2.53	0.42
2:CB:54:LEU:HA	2:CB:57:LEU:CB	2.47	0.42
2:CB:97:LEU:HB2	2:CB:100:MET:HE3	2.00	0.42
3:CC:150:LYS:HB2	3:CC:169:ARG:CG	2.50	0.42
4:CD:187:GLU:O	4:CD:190:ASP:HB2	2.19	0.42
7:CG:78:ARG:O	7:CG:79:ARG:HB2	2.20	0.42
16:CP:43:ALA:O	16:CP:46:LYS:CG	2.68	0.42
17:CQ:52:GLU:HG2	17:CQ:53:CYS:N	2.35	0.42
18:CR:24:LYS:C	18:CR:26:ILE:N	2.77	0.42
21:CU:14:VAL:HG13	21:CU:15:ALA:N	2.34	0.42
22:DA:158:U:C4	22:DA:159:G:C5	3.08	0.42
22:DA:305:C:O2	22:DA:313:G:C2	2.73	0.42
22:DA:477:A:C4	22:DA:478:A:C8	3.08	0.42
22:DA:500:G:C2	22:DA:502:A:C8	3.08	0.42
22:DA:578:G:O2'	22:DA:580:U:OP2	2.31	0.42
22:DA:659:G:C5	22:DA:660:C:C5	3.08	0.42
22:DA:732:C:C5	22:DA:733:G:N7	2.88	0.42
22:DA:742:A:H2'	22:DA:743:A:C8	2.54	0.42
22:DA:846:U:O2'	22:DA:847:U:P	2.73	0.42
22:DA:965:C:H5"	57:DA:3336:HOH:O	2.20	0.42
22:DA:993:G:H1'	39:DR:91:GLN:OE1	2.20	0.42
22:DA:1262:A:C2	22:DA:1263:U:C2	3.08	0.42
22:DA:1394:U:H6	22:DA:1394:U:H3'	1.85	0.42
22:DA:1422:G:N2	22:DA:1577:C:H1'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1751:U:O4'	22:DA:2860:A:C2	2.73	0.42
22:DA:1805:A:N3	24:DC:50:THR:HB	2.34	0.42
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.19	0.42
22:DA:2013:A:OP1	40:DS:96:ILE:HA	2.20	0.42
22:DA:2820:A:O2'	25:DD:114:LYS:HD3	2.20	0.42
23:DB:29:A:N1	23:DB:56:G:C6	2.88	0.42
25:DD:125:TRP:HB3	25:DD:160:LYS:HD3	2.01	0.42
27:DF:154:ILE:HG22	27:DF:155:THR:N	2.34	0.42
27:DF:178:ARG:CZ	27:DF:178:ARG:O	2.68	0.42
28:DG:117:LEU:HB3	28:DG:121:ILE:O	2.20	0.42
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.42
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.28	0.42
33:DL:93:ASN:C	33:DL:95:LEU:N	2.77	0.42
35:DN:55:ALA:HB1	35:DN:80:PHE:H	1.83	0.42
35:DN:85:PRO:C	35:DN:87:PHE:N	2.76	0.42
40:DS:33:LEU:HD21	40:DS:52:GLU:CG	2.49	0.42
40:DS:62:ASP:O	40:DS:63:GLY:C	2.61	0.42
41:DT:21:SER:O	41:DT:24:MET:N	2.50	0.42
42:DU:96:PHE:CE1	42:DU:103:ILE:CG1	3.02	0.42
46:DY:46:VAL:O	46:DY:50:VAL:HG23	2.19	0.42
1:AA:134:G:H1'	1:AA:325:A:C5	2.54	0.42
1:AA:172:A:C6	1:AA:174:A:C8	3.07	0.42
1:AA:284:C:H2'	1:AA:285:C:C6	2.54	0.42
1:AA:558:G:C5	1:AA:559:A:C2	3.08	0.42
1:AA:666:G:C6	1:AA:741:G:C6	3.08	0.42
1:AA:782:A:H4'	1:AA:1514:G:O2'	2.19	0.42
1:AA:787:A:H2'	1:AA:788:U:O5'	2.19	0.42
1:AA:1000:A:N1	1:AA:1041:G:N1	2.67	0.42
1:AA:1074:G:O3'	2:AB:102:THR:CG2	2.67	0.42
1:AA:1419:G:C4	1:AA:1420:U:C5	3.07	0.42
2:AB:62:SER:C	2:AB:64:LYS:N	2.76	0.42
3:AC:53:SER:O	3:AC:54:ARG:HB2	2.19	0.42
4:AD:98:LEU:HD23	4:AD:118:VAL:CG2	2.50	0.42
4:AD:191:LEU:HD12	4:AD:192:SER:OG	2.20	0.42
8:AH:99:LEU:C	8:AH:100:GLY:O	2.63	0.42
9:AI:105:THR:HG22	9:AI:106:ARG:N	2.35	0.42
12:AL:41:THR:HG22	12:AL:49:LEU:HD12	2.01	0.42
14:AN:90:ARG:HB2	14:AN:92:GLU:HG3	2.01	0.42
16:AP:39:PHE:CG	16:AP:74:LEU:HD11	2.54	0.42
16:AP:45:GLU:O	16:AP:46:LYS:O	2.37	0.42
17:AQ:41:THR:CG2	17:AQ:42:THR:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.49	0.42
21:AU:10:GLU:CD	21:AU:11:PRO:HD3	2.44	0.42
22:BA:123:G:H2'	22:BA:124:G:O4'	2.20	0.42
22:BA:749:A:N3	22:BA:1618:A:H2'	2.34	0.42
22:BA:776:G:C8	22:BA:793:A:N3	2.88	0.42
22:BA:1009:A:P	31:BJ:39:LYS:NZ	2.92	0.42
22:BA:1066:U:O2	22:BA:1069:A:C8	2.73	0.42
22:BA:1173:U:H2'	22:BA:1174:U:O5'	2.19	0.42
22:BA:1360:G:C6	22:BA:1372:U:C2	3.08	0.42
22:BA:1605:C:C3'	22:BA:1606:C:C5'	2.98	0.42
22:BA:1730:C:OP1	22:BA:1730:C:H4'	2.17	0.42
22:BA:2895:G:H2'	22:BA:2896:C:C6	2.55	0.42
25:BD:101:PHE:C	25:BD:103:ASP:N	2.74	0.42
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.35	0.42
30:BI:125:MET:HA	30:BI:128:SER:HB3	2.01	0.42
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.20	0.42
32:BK:73:ASP:OD1	32:BK:75:SER:OG	2.25	0.42
35:BN:69:ARG:O	35:BN:70:THR:HG23	2.19	0.42
42:BU:61:LYS:CE	42:BU:62:GLU:OE1	2.68	0.42
45:BX:66:THR:O	45:BX:69:ALA:HB3	2.20	0.42
49:B1:52:ALA:O	49:B1:53:LYS:C	2.62	0.42
53:B5:200:HIS:O	53:B5:201:LYS:C	2.61	0.42
1:CA:49:U:C4	1:CA:364:A:C6	3.08	0.42
1:CA:546:A:OP1	4:CD:69:GLU:HB3	2.20	0.42
1:CA:632:U:H3'	1:CA:633:G:H5'	2.02	0.42
1:CA:880:C:C2'	1:CA:881:G:H5'	2.50	0.42
1:CA:992:U:O4'	1:CA:993:G:C2	2.73	0.42
1:CA:1431:A:C6	1:CA:1432:G:O6	2.72	0.42
1:CA:1483:A:H5"	1:CA:1484:C:OP2	2.20	0.42
2:CB:152:LYS:HG3	2:CB:153:ASP:N	2.34	0.42
3:CC:156:ARG:HD3	3:CC:160:ALA:O	2.18	0.42
4:CD:12:SER:HA	4:CD:19:LEU:CD1	2.50	0.42
4:CD:13:ARG:O	4:CD:14:ARG:C	2.59	0.42
4:CD:59:GLN:O	4:CD:63:ARG:HG3	2.20	0.42
7:CG:55:GLY:O	7:CG:56:LYS:C	2.63	0.42
9:CI:28:ILE:HG21	9:CI:35:LEU:HD13	2.02	0.42
14:CN:36:ALA:HB2	14:CN:41:ARG:HG3	2.02	0.42
19:CS:15:LEU:HD22	19:CS:35:SER:HB3	2.01	0.42
22:DA:64:A:H5"	41:DT:77:ARG:HA	2.02	0.42
22:DA:222:A:C5	22:DA:224:U:C2	3.08	0.42
22:DA:228:C:O2	22:DA:418:C:H4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:228:C:H5”	22:DA:229:C:C6	2.55	0.42
22:DA:321:U:H4’	26:DE:159:LEU:O	2.20	0.42
22:DA:402:A:C2’	22:DA:403:U:H5’	2.50	0.42
22:DA:545:U:H3’	22:DA:545:U:O2	2.20	0.42
22:DA:569:U:C4	22:DA:570:G:C6	3.08	0.42
22:DA:681:G:C4	22:DA:682:G:C8	3.07	0.42
22:DA:777:G:H21	22:DA:778:G:H1’	1.85	0.42
22:DA:1352:U:H5	57:DA:3392:HOH:O	2.03	0.42
22:DA:1364:G:N2	22:DA:1367:A:OP2	2.41	0.42
22:DA:1370:C:C4’	22:DA:1810:A:H2	2.33	0.42
22:DA:1512:C:C4	22:DA:1513:U:C4	3.07	0.42
22:DA:1607:C:O2	22:DA:1621:U:C4	2.73	0.42
22:DA:2201:G:H2’	22:DA:2202:U:H6	1.85	0.42
22:DA:2209:G:C5	22:DA:2210:U:C4	3.08	0.42
22:DA:2361:G:OP1	51:D3:26:HIS:HA	2.20	0.42
22:DA:2552:U:N3	22:DA:2554:U:H5’	2.35	0.42
22:DA:2732:G:H3’	22:DA:2733:A:O4’	2.19	0.42
22:DA:2755:C:C4	52:D4:19:ARG:NH1	2.88	0.42
22:DA:2820:A:C8	25:DD:196:ALA:HB1	2.55	0.42
22:DA:2840:C:H4’	35:DN:94:TYR:OH	2.20	0.42
23:DB:29:A:C2	23:DB:56:G:C2	3.07	0.42
23:DB:58:A:C8	23:DB:59:A:N7	2.88	0.42
23:DB:81:G:C4	23:DB:82:U:C6	3.07	0.42
25:DD:2:ILE:HD13	25:DD:90:PHE:CZ	2.55	0.42
30:DI:67:PHE:CD1	30:DI:67:PHE:N	2.88	0.42
31:DJ:31:GLU:HB3	31:DJ:142:ILE:HG12	2.02	0.42
31:DJ:41:LYS:CE	31:DJ:52:ASP:OD1	2.68	0.42
32:DK:22:ILE:O	32:DK:23:LYS:HB2	2.20	0.42
35:DN:69:ARG:C	35:DN:70:THR:CG2	2.93	0.42
36:DO:36:TYR:CD2	36:DO:36:TYR:N	2.88	0.42
38:DQ:47:TYR:CZ	38:DQ:51:ARG:CZ	3.02	0.42
41:DT:8:LEU:HD22	46:DY:26:PHE:HB2	2.01	0.42
43:DV:15:GLY:O	43:DV:19:ARG:HG3	2.20	0.42
45:DX:7:VAL:HG12	45:DX:8:THR:HG23	2.01	0.42
1:AA:4:U:O2	1:AA:4:U:C2’	2.67	0.42
1:AA:626:G:H2’	1:AA:627:G:O4’	2.19	0.42
1:AA:631:C:H3’	1:AA:632:U:H5’	2.02	0.42
1:AA:749:A:H2’	1:AA:750:C:H6	1.85	0.42
1:AA:771:G:O2’	1:AA:772:U:H5’	2.19	0.42
1:AA:790:A:C6	1:AA:791:G:C6	3.08	0.42
2:AB:161:LEU:HD13	2:AB:176:ALA:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:34:THR:HG22	5:AE:52:LYS:HE2	2.01	0.42
12:AL:35:THR:O	12:AL:36:ARG:HD2	2.19	0.42
12:AL:44:LYS:HB3	12:AL:45:PRO:HD3	2.01	0.42
13:AM:66:GLU:O	13:AM:67:GLY:C	2.63	0.42
19:AS:15:LEU:O	19:AS:19:VAL:HG23	2.20	0.42
20:AT:57:ILE:HD12	20:AT:60:ARG:HD2	2.01	0.42
20:AT:69:LYS:HB2	20:AT:70:ASN:OD1	2.20	0.42
21:AU:40:LYS:HA	21:AU:43:THR:HG23	2.02	0.42
22:BA:43:G:C2'	22:BA:44:A:H5'	2.50	0.42
22:BA:68:G:H2'	22:BA:69:C:O4'	2.20	0.42
22:BA:120:U:H5"	22:BA:122:G:OP2	2.18	0.42
22:BA:468:G:O6	22:BA:469:G:C2	2.72	0.42
22:BA:548:G:H4'	22:BA:549:G:N2	2.34	0.42
22:BA:662:G:O3'	33:BL:16:GLY:HA2	2.19	0.42
22:BA:817:C:H2'	22:BA:818:G:O4'	2.20	0.42
22:BA:959:A:N1	22:BA:960:A:C2	2.88	0.42
22:BA:967:U:H2'	22:BA:968:C:C6	2.54	0.42
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.50	0.42
22:BA:1914:C:C2'	22:BA:1915:U:O5'	2.67	0.42
22:BA:2583:G:C2'	22:BA:2584:U:O5'	2.67	0.42
24:BC:245:VAL:CA	24:BC:250:VAL:O	2.68	0.42
26:BE:119:ILE:O	26:BE:187:VAL:HA	2.20	0.42
27:BF:79:ILE:HG21	27:BF:85:ILE:HD12	2.00	0.42
30:BI:112:THR:O	30:BI:114:ALA:N	2.53	0.42
32:BK:58:LEU:C	32:BK:58:LEU:CD2	2.93	0.42
34:BM:50:ARG:O	34:BM:53:MET:HG2	2.20	0.42
35:BN:108:ALA:O	35:BN:110:MET:HG2	2.20	0.42
42:BU:39:ILE:O	42:BU:40:ASN:C	2.63	0.42
1:CA:35:G:N2	12:CL:115:SER:OG	2.48	0.42
1:CA:109:A:H2'	1:CA:326:G:N2	2.35	0.42
1:CA:112:G:C2'	1:CA:113:G:H5'	2.50	0.42
1:CA:257:G:C2	1:CA:270:A:N1	2.87	0.42
1:CA:468:A:N3	1:CA:468:A:O4'	2.52	0.42
1:CA:620:C:H2'	1:CA:621:A:O4'	2.20	0.42
1:CA:666:G:C5	1:CA:741:G:C6	3.08	0.42
1:CA:705:G:N2	11:CK:31:ILE:HD12	2.35	0.42
1:CA:1144:G:H5"	1:CA:1145:A:OP2	2.20	0.42
1:CA:1494:G:O2'	22:DA:1912:A:O2'	2.21	0.42
2:CB:112:LYS:C	2:CB:114:LEU:N	2.74	0.42
2:CB:169:GLU:O	2:CB:170:HIS:C	2.62	0.42
2:CB:186:ILE:HA	2:CB:200:ILE:HB	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:20:VAL:HB	11:CK:35:THR:CG2	2.50	0.42
11:CK:87:LYS:HA	11:CK:114:THR:HG22	2.02	0.42
13:CM:18:ALA:HB2	13:CM:45:ILE:HD11	2.02	0.42
13:CM:77:ILE:O	13:CM:81:MET:HG3	2.19	0.42
15:CO:32:LEU:O	15:CO:36:ILE:HG13	2.20	0.42
20:CT:19:LYS:O	20:CT:20:HIS:C	2.63	0.42
22:DA:454:A:C3'	22:DA:455:C:H5'	2.50	0.42
22:DA:590:A:H2'	22:DA:591:U:C6	2.54	0.42
22:DA:671:C:HO2'	22:DA:672:C:C5'	2.26	0.42
22:DA:687:C:N3	22:DA:788:A:H5'	2.35	0.42
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.19	0.42
22:DA:1095:A:H2'	22:DA:1096:A:C4	2.55	0.42
22:DA:1311:G:N2	22:DA:1604:C:N4	2.68	0.42
22:DA:1509:A:C5	22:DA:1510:G:N7	2.87	0.42
22:DA:1539:U:N3	22:DA:1540:G:N7	2.68	0.42
22:DA:1669:A:N3	22:DA:1669:A:H3'	2.35	0.42
22:DA:1831:G:O6	22:DA:1973:G:O6	2.38	0.42
22:DA:2148:G:C2	22:DA:2149:U:C5	3.08	0.42
22:DA:2199:A:N7	22:DA:2225:A:N6	2.68	0.42
22:DA:2540:C:H2'	22:DA:2541:A:O4'	2.20	0.42
22:DA:2638:G:O2'	22:DA:2775:G:N2	2.43	0.42
22:DA:2760:C:O2'	22:DA:2761:A:H5'	2.19	0.42
22:DA:2823:A:H2'	22:DA:2824:C:H5'	2.02	0.42
23:DB:109:A:C5	23:DB:110:C:C4	3.08	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
36:DO:92:PHE:HB2	36:DO:117:PHE:CD1	2.55	0.42
41:DT:65:GLY:HA3	41:DT:77:ARG:HB3	2.01	0.42
50:D2:18:PHE:C	50:D2:20:ALA:N	2.74	0.42
1:AA:81:A:H2'	1:AA:82:G:H5"	2.02	0.42
1:AA:195:A:H1'	1:AA:222:C:O2'	2.20	0.42
1:AA:914:A:C6	1:AA:915:A:N7	2.88	0.42
1:AA:1014:A:O4'	19:AS:34:TRP:CZ3	2.72	0.42
1:AA:1157:A:C5	1:AA:1180:A:C6	3.08	0.42
1:AA:1288:A:C2	1:AA:1289:A:C4	3.07	0.42
1:AA:1312:G:N2	1:AA:1313:U:C2	2.88	0.42
1:AA:1330:U:C4	1:AA:1331:G:C6	3.07	0.42
1:AA:1431:A:O5'	1:AA:1431:A:H8	2.03	0.42
4:AD:161:LEU:HD23	4:AD:161:LEU:C	2.45	0.42
10:AJ:52:LEU:CB	14:AN:81:ARG:NE	2.83	0.42
16:AP:44:SER:OG	16:AP:46:LYS:HG3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:86:G:N2	22:BA:97:C:C2	2.88	0.42
22:BA:189:G:P	45:BX:26:LYS:HE3	2.60	0.42
22:BA:207:A:O2'	22:BA:799:G:C4'	2.68	0.42
22:BA:457:A:O4'	22:BA:459:U:C6	2.73	0.42
22:BA:549:G:N3	22:BA:549:G:O4'	2.52	0.42
22:BA:577:G:O2'	22:BA:1254:A:OP1	2.38	0.42
22:BA:713:G:C6	22:BA:714:U:C4	3.08	0.42
22:BA:1613:G:O2'	50:B2:3:ARG:HD2	2.19	0.42
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.50	0.42
22:BA:1924:C:H2'	22:BA:1925:C:H5'	2.02	0.42
22:BA:2286:G:C5'	22:BA:2287:A:O5'	2.68	0.42
22:BA:2507:C:N4	22:BA:2508:G:C6	2.87	0.42
22:BA:2746:U:H2'	22:BA:2747:G:H5'	2.02	0.42
22:BA:2852:G:C6	22:BA:2853:C:C4	3.08	0.42
23:BB:18:G:C6	23:BB:19:C:C4	3.08	0.42
24:BC:146:MET:CG	24:BC:154:LEU:HD21	2.49	0.42
24:BC:252:THR:HG22	24:BC:253:LYS:H	1.84	0.42
25:BD:98:VAL:C	25:BD:100:LEU:N	2.76	0.42
26:BE:7:ASP:OD1	26:BE:8:ALA:N	2.45	0.42
26:BE:59:PRO:CD	26:BE:71:GLY:O	2.67	0.42
28:BG:125:CYS:HA	28:BG:130:GLU:O	2.20	0.42
29:BH:41:LYS:O	29:BH:42:LYS:C	2.62	0.42
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.42
30:BI:34:ASN:HB2	30:BI:37:GLU:HB2	2.01	0.42
33:BL:29:LYS:CG	33:BL:30:THR:N	2.80	0.42
42:BU:4:LYS:O	42:BU:5:ILE:HD13	2.20	0.42
52:B4:37:GLN:O	52:B4:37:GLN:NE2	2.44	0.42
1:CA:38:G:N2	1:CA:397:A:N3	2.68	0.42
1:CA:382:A:H2'	1:CA:383:A:C8	2.54	0.42
1:CA:957:U:O2	1:CA:959:A:C8	2.72	0.42
1:CA:1002:G:C5	1:CA:1003:G:C8	3.08	0.42
1:CA:1195:C:C4	1:CA:1197:A:N7	2.88	0.42
1:CA:1239:A:H4'	1:CA:1240:U:H5"	2.00	0.42
2:CB:16:PHE:CZ	2:CB:18:HIS:NE2	2.87	0.42
2:CB:131:LYS:O	2:CB:135:LEU:N	2.47	0.42
3:CC:117:ALA:HB1	3:CC:187:SER:HB3	2.02	0.42
3:CC:172:ARG:NH1	3:CC:174:PRO:HG3	2.34	0.42
5:CE:132:ASN:O	5:CE:136:VAL:HG12	2.19	0.42
7:CG:38:THR:O	7:CG:38:THR:HG23	2.20	0.42
7:CG:51:ALA:HB2	7:CG:58:GLU:HA	2.01	0.42
7:CG:111:ARG:CZ	7:CG:122:ASN:HB3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:26:GLY:CA	9:CI:61:LEU:O	2.68	0.42
12:CL:82:ILE:CD1	12:CL:95:TYR:CB	2.98	0.42
20:CT:25:ARG:HD2	20:CT:29:ARG:NH1	2.34	0.42
22:DA:38:A:H4'	26:DE:45:ALA:HB2	2.02	0.42
22:DA:249:C:P	22:DA:2394:C:O2'	2.78	0.42
22:DA:265:A:C8	22:DA:428:A:C2	3.08	0.42
22:DA:303:G:N1	22:DA:304:U:C2	2.88	0.42
22:DA:491:G:C6	22:DA:492:A:C5	3.08	0.42
22:DA:590:A:C5	22:DA:591:U:C4	3.08	0.42
22:DA:633:A:H5"	33:DL:70:LYS:HD2	2.01	0.42
22:DA:729:G:H2'	22:DA:1775:U:H1'	2.02	0.42
22:DA:729:G:N3	22:DA:1775:U:H1'	2.35	0.42
22:DA:848:C:H2'	22:DA:849:A:C8	2.55	0.42
22:DA:848:C:H2'	22:DA:849:A:H8	1.85	0.42
22:DA:912:C:C4	22:DA:913:U:O4	2.73	0.42
22:DA:981:A:H5"	22:DA:982:C:OP2	2.20	0.42
22:DA:1224:U:H4'	39:DR:88:GLY:O	2.20	0.42
22:DA:1338:G:O6	41:DT:66:LYS:NZ	2.45	0.42
22:DA:1352:U:C5	22:DA:1377:G:O6	2.73	0.42
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.55	0.42
22:DA:1620:G:C6	22:DA:1621:U:C4	3.08	0.42
22:DA:1664:A:H1'	22:DA:2726:A:N1	2.35	0.42
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.55	0.42
23:DB:64:G:C6	23:DB:65:U:C4	3.08	0.42
23:DB:68:C:O2'	23:DB:69:G:H5'	2.20	0.42
26:DE:149:ILE:CG1	26:DE:188:MET:HE3	2.50	0.42
27:DF:136:ILE:O	27:DF:136:ILE:HG22	2.20	0.42
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.42
29:DH:43:ASN:C	29:DH:45:GLU:H	2.28	0.42
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.19	0.42
41:DT:10:VAL:HG12	41:DT:11:LEU:N	2.34	0.42
42:DU:67:VAL:O	42:DU:67:VAL:CG1	2.68	0.42
1:AA:168:G:H5'	1:AA:169:C:OP2	2.20	0.41
1:AA:232:G:C5	1:AA:233:C:C5	3.08	0.41
1:AA:258:G:C5	1:AA:259:G:C8	3.07	0.41
1:AA:410:G:H5"	1:AA:411:A:P	2.60	0.41
1:AA:543:U:O2'	1:AA:544:G:H5'	2.20	0.41
1:AA:545:C:H5'	4:AD:69:GLU:CG	2.50	0.41
1:AA:976:G:H1'	1:AA:1363:A:N6	2.35	0.41
1:AA:1014:A:C4	19:AS:34:TRP:CZ3	3.08	0.41
1:AA:1049:U:O4'	1:AA:1201:A:C8	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1050:G:N3	1:AA:1050:G:H2'	2.34	0.41
1:AA:1055:A:C4	1:AA:1206:G:C2	3.08	0.41
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.33	0.41
1:AA:1213:A:C8	1:AA:1215:G:C6	3.08	0.41
1:AA:1313:U:C2	1:AA:1314:C:C5	3.08	0.41
1:AA:1313:U:N3	1:AA:1314:C:C5	2.88	0.41
1:AA:1347:G:HO2'	1:AA:1348:U:P	2.42	0.41
1:AA:1362:A:H5"	1:AA:1363:A:OP2	2.19	0.41
1:AA:1417:G:O6	1:AA:1482:G:C6	2.73	0.41
2:AB:136:MET:N	2:AB:136:MET:SD	2.93	0.41
3:AC:27:LYS:H	3:AC:27:LYS:HD2	1.85	0.41
3:AC:53:SER:CB	3:AC:115:LEU:HG	2.50	0.41
3:AC:112:ASP:O	3:AC:116:VAL:HG23	2.20	0.41
3:AC:114:LYS:HD3	3:AC:185:ASN:OD1	2.20	0.41
3:AC:150:LYS:HA	3:AC:168:TYR:O	2.20	0.41
7:AG:46:ALA:HB3	7:AG:120:LEU:HD12	2.02	0.41
8:AH:64:LYS:HB3	8:AH:64:LYS:HE2	1.87	0.41
17:AQ:18:GLU:O	17:AQ:19:LYS:HB2	2.20	0.41
19:AS:50:ALA:HB1	19:AS:57:HIS:CB	2.49	0.41
22:BA:194:G:H2'	22:BA:195:A:H5'	2.01	0.41
22:BA:521:U:H2'	22:BA:522:A:C8	2.55	0.41
22:BA:563:A:N1	22:BA:564:C:N3	2.68	0.41
22:BA:1020:A:C2	22:BA:1141:U:O2	2.72	0.41
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.50	0.41
22:BA:1650:A:N6	57:BA:3803:HOH:O	2.53	0.41
22:BA:1686:C:C2'	22:BA:1687:G:H5'	2.50	0.41
22:BA:1708:C:H2'	22:BA:1709:U:C6	2.55	0.41
22:BA:1952:A:C5	32:BK:22:ILE:HG21	2.55	0.41
22:BA:2112:G:H2'	22:BA:2112:G:N3	2.35	0.41
22:BA:2492:U:H2'	22:BA:2493:U:O5'	2.20	0.41
22:BA:2695:U:O2'	22:BA:2696:U:H5'	2.20	0.41
23:BB:8:C:O2'	36:BO:40:ILE:HD13	2.20	0.41
26:BE:42:GLY:HA3	26:BE:90:GLN:O	2.19	0.41
26:BE:84:THR:HG22	26:BE:85:PHE:CD2	2.55	0.41
27:BF:8:TYR:OH	27:BF:30:ARG:HG2	2.21	0.41
28:BG:10:VAL:HG23	28:BG:48:ASN:O	2.20	0.41
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
34:BM:97:GLN:CD	34:BM:97:GLN:N	2.77	0.41
35:BN:65:LEU:HD12	35:BN:65:LEU:O	2.20	0.41
35:BN:69:ARG:C	35:BN:70:THR:HG23	2.45	0.41
37:BP:3:ASN:O	37:BP:4:ILE:C	2.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:66:HIS:ND1	39:BR:94:THR:HB	2.34	0.41
45:BX:43:GLU:O	45:BX:44:LYS:C	2.63	0.41
53:B5:52:PRO:HG3	53:B5:205:ALA:O	2.20	0.41
1:CA:68:G:C5	1:CA:69:G:H1'	2.54	0.41
1:CA:69:G:H3'	1:CA:70:U:C6	2.55	0.41
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.55	0.41
1:CA:142:G:C2	1:CA:143:A:H1'	2.54	0.41
1:CA:247:G:C5	1:CA:278:G:C2	3.08	0.41
1:CA:309:A:H5"	16:CP:29:ASN:O	2.20	0.41
1:CA:425:G:H2'	1:CA:426:U:O4'	2.20	0.41
1:CA:914:A:C6	1:CA:915:A:C5	3.08	0.41
1:CA:940:C:H2'	1:CA:941:G:C8	2.55	0.41
1:CA:1148:U:C5	1:CA:1149:C:C5	3.08	0.41
1:CA:1151:A:N3	1:CA:1152:A:C8	2.88	0.41
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.56	0.41
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.85	0.41
2:CB:11:LYS:O	2:CB:12:ALA:C	2.62	0.41
3:CC:42:TYR:CE1	3:CC:46:GLU:CG	3.03	0.41
5:CE:69:ARG:HG3	5:CE:70:ASN:OD1	2.20	0.41
6:CF:3:HIS:CE1	6:CF:65:GLU:HG3	2.55	0.41
10:CJ:52:LEU:CD2	10:CJ:59:LYS:HA	2.50	0.41
13:CM:73:ILE:O	13:CM:77:ILE:HG13	2.19	0.41
17:CQ:49:GLU:C	17:CQ:50:ASN:ND2	2.78	0.41
19:CS:58:VAL:HA	19:CS:59:PRO:HD3	1.93	0.41
21:CU:25:LYS:HD3	21:CU:26:ALA:H	1.85	0.41
22:DA:425:G:C2	22:DA:426:C:N3	2.88	0.41
22:DA:693:A:C5	22:DA:694:U:C5	3.07	0.41
22:DA:707:G:C2'	22:DA:708:G:H5'	2.49	0.41
22:DA:1045:C:H1'	22:DA:1047:G:C6	2.55	0.41
22:DA:1051:G:C5	22:DA:1052:C:C4	3.08	0.41
22:DA:1276:A:C2	22:DA:1295:C:O2	2.73	0.41
22:DA:1319:C:H2'	22:DA:1320:C:H5'	2.01	0.41
22:DA:1324:G:C2	22:DA:1328:A:C6	3.07	0.41
22:DA:1358:G:H2'	22:DA:1359:A:OP2	2.19	0.41
22:DA:1364:G:N3	22:DA:1368:G:C2	2.88	0.41
22:DA:1473:G:C4	22:DA:1519:G:C2	3.08	0.41
22:DA:1495:A:C6	22:DA:1496:A:C6	3.09	0.41
22:DA:1606:C:O2'	22:DA:1607:C:P	2.77	0.41
22:DA:2024:G:C4	22:DA:2040:G:N2	2.88	0.41
22:DA:2114:A:N3	22:DA:2114:A:H2'	2.34	0.41
22:DA:2467:C:O2	34:DM:123:LYS:NZ	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2632:A:O2'	22:DA:2633:G:H5'	2.19	0.41
22:DA:2671:G:C2	22:DA:2672:U:C2	3.08	0.41
22:DA:2714:G:C5	22:DA:2715:C:C5	3.08	0.41
25:DD:1:MET:HG2	25:DD:205:PRO:HG2	2.02	0.41
26:DE:136:GLN:O	26:DE:137:LYS:C	2.62	0.41
30:DI:76:ALA:O	30:DI:80:LEU:HD12	2.20	0.41
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.45	0.41
46:DY:11:VAL:O	46:DY:15:ASN:CG	2.62	0.41
1:AA:71:A:OP2	1:AA:71:A:C3'	2.67	0.41
1:AA:283:U:C4	1:AA:284:C:C5	3.08	0.41
1:AA:785:G:N2	1:AA:798:U:C2	2.88	0.41
1:AA:880:C:OP1	12:AL:9:ARG:NH2	2.52	0.41
1:AA:1374:A:N3	1:AA:1375:A:C8	2.88	0.41
2:AB:35:ARG:CB	2:AB:40:ILE:HD11	2.49	0.41
4:AD:91:LEU:HD21	4:AD:195:ILE:HD12	2.01	0.41
4:AD:160:GLU:O	4:AD:163:GLU:OE1	2.38	0.41
5:AE:100:SER:O	5:AE:101:GLU:O	2.37	0.41
8:AH:75:ILE:HD13	8:AH:129:VAL:HG13	2.02	0.41
10:AJ:10:LEU:HG	10:AJ:98:VAL:HG12	2.01	0.41
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.48	0.41
13:AM:19:LEU:O	13:AM:25:VAL:HG21	2.19	0.41
19:AS:80:TYR:CD1	19:AS:81:ARG:N	2.88	0.41
22:BA:310:A:O2'	22:BA:311:A:P	2.78	0.41
22:BA:435:C:C2'	22:BA:436:C:H5'	2.50	0.41
22:BA:511:U:C5	22:BA:512:G:C4	3.07	0.41
22:BA:584:C:P	38:BQ:6:ARG:HG3	2.61	0.41
22:BA:744:U:H2'	22:BA:745:G:O4'	2.19	0.41
22:BA:1734:G:C2	22:BA:1735:A:C8	3.09	0.41
22:BA:1825:U:H2'	22:BA:1826:G:C8	2.55	0.41
22:BA:1826:G:O2'	22:BA:1971:U:OP2	2.38	0.41
22:BA:1853:A:N6	22:BA:1889:A:C4	2.87	0.41
22:BA:1917:U:H5'	22:BA:1918:A:OP2	2.20	0.41
22:BA:2204:G:C4	22:BA:2205:A:C8	3.07	0.41
22:BA:2249:U:O2'	22:BA:2252:G:OP2	2.24	0.41
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.20	0.41
22:BA:2733:A:C5	25:BD:208:LYS:HE2	2.56	0.41
24:BC:53:HIS:CE1	24:BC:219:THR:HA	2.55	0.41
24:BC:65:VAL:HG12	24:BC:67:PHE:CE2	2.55	0.41
28:BG:24:ILE:HD11	28:BG:43:VAL:HG11	2.01	0.41
33:BL:49:GLY:O	33:BL:51:GLU:HG3	2.20	0.41
37:BP:96:LYS:HB3	37:BP:98:TYR:CE2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:35:ALA:O	38:BQ:38:ALA:N	2.53	0.41
39:BR:62:GLU:O	39:BR:64:VAL:HG12	2.19	0.41
41:BT:40:LYS:HD3	41:BT:58:VAL:O	2.20	0.41
43:BV:61:LEU:N	43:BV:61:LEU:HD13	2.35	0.41
48:B0:30:VAL:HG12	48:B0:35:GLY:HA2	2.02	0.41
53:B5:42:VAL:O	53:B5:179:ALA:N	2.53	0.41
1:CA:17:U:N3	1:CA:18:C:C4	2.88	0.41
1:CA:40:C:H2'	1:CA:41:G:O4'	2.20	0.41
1:CA:116:A:C2	1:CA:117:G:H1'	2.54	0.41
1:CA:184:G:C2	1:CA:185:U:C2	3.08	0.41
1:CA:386:C:C4	1:CA:387:U:C4	3.08	0.41
1:CA:389:A:C6	1:CA:390:U:H1'	2.55	0.41
1:CA:414:A:C2	1:CA:415:A:C4	3.08	0.41
1:CA:563:A:N7	1:CA:567:G:H1'	2.35	0.41
1:CA:706:A:C4	1:CA:707:U:C5	3.09	0.41
1:CA:836:G:C6	1:CA:851:G:C5	3.08	0.41
1:CA:851:G:H2'	1:CA:851:G:N3	2.35	0.41
1:CA:1197:A:C2	1:CA:1198:G:C8	3.08	0.41
1:CA:1251:A:H2'	1:CA:1252:A:C8	2.54	0.41
1:CA:1413:A:N1	1:CA:1488:G:C2	2.88	0.41
3:CC:72:ARG:HB3	3:CC:75:ILE:HG22	2.01	0.41
5:CE:90:THR:HG22	5:CE:91:GLY:N	2.35	0.41
6:CF:16:GLU:C	6:CF:18:VAL:N	2.78	0.41
6:CF:38:ARG:HG3	6:CF:63:ASN:CB	2.49	0.41
7:CG:46:ALA:HB2	7:CG:117:ALA:CA	2.50	0.41
7:CG:101:MET:HA	7:CG:104:ILE:HD12	2.02	0.41
11:CK:74:VAL:O	11:CK:74:VAL:HG23	2.19	0.41
18:CR:23:TYR:HA	18:CR:29:LEU:HD21	2.02	0.41
22:DA:46:G:N2	22:DA:47:C:N1	2.68	0.41
22:DA:154:U:H2'	22:DA:155:A:C8	2.55	0.41
22:DA:183:C:H1'	22:DA:433:C:H1'	2.01	0.41
22:DA:277:G:H3'	22:DA:277:G:N3	2.35	0.41
22:DA:404:A:O4'	22:DA:405:U:OP2	2.38	0.41
22:DA:636:G:O2'	22:DA:638:G:O2'	2.34	0.41
22:DA:1355:G:O6	22:DA:1377:G:N2	2.53	0.41
22:DA:1710:G:C6	22:DA:1749:A:C2	3.08	0.41
22:DA:1809:A:H2'	22:DA:1810:A:H8	1.85	0.41
22:DA:1930:G:O2'	22:DA:1931:U:OP2	2.38	0.41
22:DA:2345:G:C4	22:DA:2347:C:C5	3.08	0.41
22:DA:2838:G:C6	22:DA:2839:G:C6	3.08	0.41
22:DA:2902:C:OP1	22:DA:2903:U:C6	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:173:GLN:O	25:DD:175:LEU:N	2.53	0.41
26:DE:21:ARG:HD3	26:DE:106:LYS:HB3	2.01	0.41
27:DF:70:ALA:HB3	27:DF:80:ARG:O	2.20	0.41
27:DF:106:ILE:C	27:DF:109:PRO:HD2	2.44	0.41
28:DG:44:LYS:N	28:DG:44:LYS:HE3	2.35	0.41
28:DG:90:VAL:HG21	28:DG:163:ARG:NE	2.35	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
30:DI:20:PRO:HB2	30:DI:23:PRO:HG2	2.02	0.41
38:DQ:65:ILE:HD11	38:DQ:95:LEU:HB2	2.01	0.41
41:DT:7:LEU:HD22	41:DT:46:ALA:HA	2.02	0.41
41:DT:89:GLU:OE2	41:DT:89:GLU:HA	2.19	0.41
42:DU:59:VAL:CG1	42:DU:61:LYS:HD3	2.50	0.41
1:AA:220:G:O2'	1:AA:221:C:H5'	2.21	0.41
1:AA:507:C:N3	1:AA:508:U:C5	2.89	0.41
1:AA:790:A:H2'	1:AA:791:G:C8	2.55	0.41
1:AA:803:G:C6	1:AA:804:U:N3	2.89	0.41
1:AA:934:C:H4'	1:AA:935:A:OP1	2.20	0.41
1:AA:963:G:C4	1:AA:964:A:C8	3.08	0.41
1:AA:1014:A:N7	1:AA:1015:G:C4	2.88	0.41
1:AA:1306:A:C2	1:AA:1307:U:C1'	3.04	0.41
1:AA:1504:G:H3'	57:AA:1802:HOH:O	2.19	0.41
3:AC:70:THR:C	3:AC:106:VAL:HG23	2.45	0.41
4:AD:15:GLU:HG3	4:AD:19:LEU:HD11	2.02	0.41
5:AE:74:VAL:HG11	5:AE:144:LEU:HB3	2.02	0.41
5:AE:136:VAL:CG2	5:AE:137:VAL:N	2.83	0.41
7:AG:13:LEU:HD22	7:AG:13:LEU:H	1.84	0.41
9:AI:25:ASN:HB3	9:AI:59:GLU:OE1	2.20	0.41
9:AI:50:GLN:O	9:AI:52:LEU:N	2.54	0.41
10:AJ:48:ARG:HD3	14:AN:101:TRP:CZ3	2.55	0.41
14:AN:87:ALA:O	14:AN:92:GLU:HB2	2.20	0.41
15:AO:83:GLU:O	15:AO:86:GLY:N	2.53	0.41
17:AQ:12:VAL:HG11	17:AQ:55:ILE:HA	2.02	0.41
17:AQ:15:ASP:HA	17:AQ:21:ILE:HD11	2.01	0.41
17:AQ:79:VAL:HG12	17:AQ:80:GLU:HG3	2.02	0.41
21:AU:4:ILE:CA	21:AU:20:LYS:HE3	2.49	0.41
21:AU:53:VAL:CG1	21:AU:54:LYS:N	2.83	0.41
22:BA:320:A:H4'	22:BA:322:A:N7	2.35	0.41
22:BA:574:A:C2	25:BD:150:GLN:OE1	2.73	0.41
22:BA:749:A:H4'	22:BA:1271:G:N3	2.35	0.41
22:BA:827:U:H2'	22:BA:2068:U:C2	2.55	0.41
22:BA:914:G:C8	22:BA:914:G:H3'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1047:G:H1'	22:BA:1110:G:N2	2.35	0.41
22:BA:1157:G:H2'	22:BA:1157:G:N3	2.35	0.41
22:BA:1333:G:C2	22:BA:1334:G:C8	3.08	0.41
22:BA:1489:C:C2	22:BA:1501:G:N2	2.89	0.41
22:BA:1808:A:N1	45:BX:28:ARG:HD2	2.35	0.41
22:BA:1826:G:H2'	22:BA:1827:U:H6	1.84	0.41
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.54	0.41
22:BA:2673:G:N3	22:BA:2674:G:C8	2.89	0.41
22:BA:2808:G:N1	22:BA:2891:U:C5	2.88	0.41
22:BA:2885:G:H2'	22:BA:2886:A:C5'	2.50	0.41
24:BC:3:VAL:HG12	24:BC:19:VAL:HG22	2.02	0.41
24:BC:212:ARG:HD2	24:BC:212:ARG:HA	1.82	0.41
30:BI:17:MET:HE2	30:BI:17:MET:HA	2.02	0.41
30:BI:54:PRO:O	30:BI:75:PRO:HD2	2.21	0.41
31:BJ:5:THR:HB	31:BJ:6:ALA:O	2.20	0.41
32:BK:118:LEU:O	32:BK:119:ALA:CB	2.68	0.41
33:BL:20:GLY:HA2	33:BL:28:GLY:HA2	2.01	0.41
36:BO:87:ILE:C	36:BO:88:LYS:O	2.62	0.41
37:BP:113:ARG:O	37:BP:114:LEU:O	2.39	0.41
38:BQ:78:LYS:O	38:BQ:79:PHE:C	2.62	0.41
39:BR:69:GLY:O	39:BR:70:GLU:C	2.63	0.41
42:BU:26:LYS:HD2	42:BU:26:LYS:HA	1.90	0.41
1:CA:173:U:C2	1:CA:197:A:N1	2.88	0.41
1:CA:436:C:H2'	1:CA:437:U:C6	2.55	0.41
1:CA:784:A:H2'	1:CA:785:G:O4'	2.20	0.41
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.20	0.41
1:CA:1192:C:C5	1:CA:1193:G:C8	3.08	0.41
1:CA:1246:A:C2	1:CA:1247:U:C2	3.08	0.41
1:CA:1289:A:H2'	1:CA:1290:G:H5'	2.01	0.41
1:CA:1480:A:C2	1:CA:1481:U:C2	3.08	0.41
2:CB:90:PHE:HB3	2:CB:150:GLY:O	2.20	0.41
2:CB:184:PHE:CD2	2:CB:198:PHE:HB2	2.55	0.41
3:CC:83:ASP:O	3:CC:84:VAL:C	2.62	0.41
3:CC:174:PRO:O	3:CC:176:HIS:N	2.53	0.41
4:CD:33:LYS:O	4:CD:34:ILE:C	2.62	0.41
5:CE:16:ILE:N	5:CE:16:ILE:HD12	2.35	0.41
7:CG:66:LEU:HD23	7:CG:70:ARG:NE	2.35	0.41
7:CG:116:MET:O	7:CG:120:LEU:N	2.52	0.41
11:CK:25:ALA:O	11:CK:89:PRO:O	2.38	0.41
12:CL:47:SER:O	12:CL:48:ALA:HB2	2.20	0.41
17:CQ:31:HIS:CG	17:CQ:32:PRO:HD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CS:55:ARG:NE	19:CS:79:THR:HG22	2.35	0.41
22:DA:160:A:N6	22:DA:161:A:N6	2.69	0.41
22:DA:247:G:N7	22:DA:249:C:N1	2.68	0.41
22:DA:289:G:C2	22:DA:352:A:N1	2.88	0.41
22:DA:616:A:H4'	26:DE:101:TYR:CE2	2.54	0.41
22:DA:676:A:H2	22:DA:2069:G:N3	2.18	0.41
22:DA:703:U:C5	22:DA:704:G:C6	3.08	0.41
22:DA:712:G:C2	22:DA:720:U:O2	2.74	0.41
22:DA:861:A:N3	23:DB:79:G:O2'	2.49	0.41
22:DA:1045:C:N4	22:DA:1111:A:H2'	2.35	0.41
22:DA:1090:A:C6	22:DA:1102:C:O2	2.73	0.41
22:DA:1635:A:C8	22:DA:1636:U:C5	3.08	0.41
22:DA:1819:A:H4'	22:DA:1820:U:H5"	2.03	0.41
22:DA:1827:U:O2'	22:DA:1970:A:N3	2.52	0.41
22:DA:1833:C:N4	22:DA:1834:U:C4	2.88	0.41
22:DA:2127:G:N3	22:DA:2162:G:C8	2.89	0.41
22:DA:2131:U:O4'	22:DA:2133:G:H1'	2.19	0.41
22:DA:2225:A:H4'	22:DA:2226:C:O5'	2.20	0.41
22:DA:2324:U:O2	22:DA:2385:C:N4	2.53	0.41
22:DA:2341:G:H2'	22:DA:2342:C:C6	2.55	0.41
22:DA:2371:G:N1	22:DA:2372:U:C5	2.88	0.41
22:DA:2520:C:O2'	22:DA:2565:A:O2'	2.20	0.41
22:DA:2757:A:N1	28:DG:67:THR:CG2	2.78	0.41
24:DC:221:ARG:NH1	24:DC:224:ALA:HB2	2.36	0.41
24:DC:246:THR:C	24:DC:248:TRP:N	2.78	0.41
25:DD:121:THR:HG21	25:DD:143:PRO:HB3	2.03	0.41
26:DE:182:ALA:CB	33:DL:3:LEU:HD22	2.50	0.41
32:DK:99:ILE:HD12	32:DK:99:ILE:N	2.34	0.41
33:DL:29:LYS:O	33:DL:30:THR:HG23	2.20	0.41
33:DL:85:VAL:HG23	33:DL:86:GLU:N	2.35	0.41
33:DL:110:VAL:CG2	33:DL:127:VAL:HG22	2.50	0.41
34:DM:56:ALA:C	34:DM:58:LYS:H	2.28	0.41
39:DR:78:ARG:CB	39:DR:83:TYR:CD1	3.03	0.41
51:D3:3:LYS:O	51:D3:4:ILE:C	2.63	0.41
1:AA:145:G:N2	1:AA:178:C:C2	2.89	0.41
1:AA:149:A:H1'	1:AA:1446:A:C2	2.56	0.41
1:AA:191:G:H2'	1:AA:192:A:C8	2.55	0.41
1:AA:194:C:H2'	1:AA:195:A:H5'	2.03	0.41
1:AA:464:U:C2	1:AA:466:A:H5"	2.55	0.41
1:AA:592:G:C2	1:AA:593:U:C2	3.09	0.41
1:AA:724:G:N1	1:AA:725:G:C5	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:825:A:O2'	1:AA:826:C:H5'	2.20	0.41
1:AA:1050:G:C2	1:AA:1209:C:O2	2.72	0.41
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.49	0.41
2:AB:161:LEU:HD12	2:AB:181:ILE:CG2	2.50	0.41
6:AF:47:LEU:HD13	6:AF:51:ILE:CG2	2.47	0.41
7:AG:27:VAL:O	7:AG:28:ASN:C	2.62	0.41
9:AI:30:ILE:HB	9:AI:65:ILE:HG12	2.02	0.41
10:AJ:52:LEU:HD22	10:AJ:62:ARG:CG	2.49	0.41
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	2.01	0.41
11:AK:67:ALA:HB1	11:AK:100:LEU:HD13	2.03	0.41
20:AT:19:LYS:O	20:AT:20:HIS:C	2.64	0.41
20:AT:82:GLN:O	20:AT:85:LYS:HB2	2.20	0.41
22:BA:142:A:C5	22:BA:143:C:N3	2.88	0.41
22:BA:197:A:H62	22:BA:2430:A:H2'	1.84	0.41
22:BA:271:G:C2	22:BA:272:A:C4	3.09	0.41
22:BA:320:A:H2'	26:BE:131:THR:HG21	2.02	0.41
22:BA:563:A:N1	22:BA:564:C:C2	2.88	0.41
22:BA:573:U:O2'	22:BA:574:A:H3'	2.21	0.41
22:BA:675:A:N3	22:BA:2443:C:O2'	2.52	0.41
22:BA:732:C:H2'	22:BA:733:G:O4'	2.20	0.41
22:BA:826:U:O2'	33:BL:53:GLY:CA	2.68	0.41
22:BA:1072:C:C2	22:BA:1093:G:O6	2.74	0.41
22:BA:1131:G:N2	22:BA:2024:G:H21	2.18	0.41
22:BA:1525:A:C5	22:BA:1526:C:C6	3.09	0.41
22:BA:1988:G:H2'	22:BA:1989:G:O4'	2.20	0.41
22:BA:2018:G:H2'	22:BA:2019:A:C8	2.56	0.41
22:BA:2298:A:N1	22:BA:2321:U:C4	2.88	0.41
22:BA:2519:U:C5	22:BA:2541:A:C6	3.09	0.41
23:BB:46:A:C5	23:BB:47:C:C4	3.08	0.41
23:BB:92:C:O2'	23:BB:93:C:H5'	2.20	0.41
23:BB:94:A:C6	23:BB:95:U:C4	3.09	0.41
24:BC:76:ALA:HB2	24:BC:96:TYR:CG	2.55	0.41
27:BF:94:GLU:HG3	27:BF:98:GLU:OE1	2.20	0.41
28:BG:13:ALA:O	28:BG:14:GLY:C	2.63	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
30:BI:71:THR:C	30:BI:72:LYS:HD2	2.45	0.41
32:BK:17:ARG:HD3	32:BK:17:ARG:HA	1.88	0.41
32:BK:23:LYS:HB2	32:BK:23:LYS:HE2	1.80	0.41
34:BM:42:THR:HG22	34:BM:93:VAL:CG1	2.49	0.41
36:BO:98:GLN:O	36:BO:100:HIS:N	2.53	0.41
39:BR:52:PRO:O	39:BR:53:PHE:O	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:44:LYS:HG3	41:BT:55:VAL:HG11	2.02	0.41
43:BV:89:ILE:CG2	43:BV:90:ASP:N	2.80	0.41
43:BV:89:ILE:HG22	43:BV:90:ASP:N	2.33	0.41
1:CA:110:C:C4	1:CA:111:G:C5	3.08	0.41
1:CA:420:U:O2'	1:CA:421:U:H5"	2.20	0.41
1:CA:555:U:C2	1:CA:556:C:C5	3.09	0.41
1:CA:577:G:O2'	1:CA:578:C:H5'	2.20	0.41
1:CA:667:G:N1	1:CA:740:U:C2	2.88	0.41
1:CA:715:A:O2'	1:CA:716:A:H5'	2.20	0.41
1:CA:779:C:C2'	1:CA:780:A:H5'	2.51	0.41
1:CA:890:G:HO2'	1:CA:906:A:H61	1.68	0.41
1:CA:947:G:H2'	1:CA:948:C:O4'	2.20	0.41
1:CA:1097:C:C2	1:CA:1098:C:C6	3.09	0.41
1:CA:1306:A:C2	1:CA:1307:U:C2	3.08	0.41
1:CA:1349:A:C2	1:CA:1374:A:C4	3.09	0.41
1:CA:1371:G:H2'	1:CA:1372:U:O4'	2.21	0.41
2:CB:111:ILE:O	2:CB:114:LEU:HB3	2.21	0.41
6:CF:50:PRO:CD	18:CR:74:HIS:HB3	2.50	0.41
11:CK:112:ASP:OD1	11:CK:114:THR:HG23	2.21	0.41
12:CL:25:GLU:CG	12:CL:27:CYS:SG	3.09	0.41
13:CM:19:LEU:O	13:CM:22:ILE:CD1	2.69	0.41
22:DA:279:A:H61	22:DA:361:G:C2'	2.34	0.41
22:DA:538:A:O2'	31:DJ:8:PRO:CD	2.68	0.41
22:DA:693:A:H2'	22:DA:694:U:C6	2.56	0.41
22:DA:740:C:C5'	22:DA:1784:A:H3'	2.49	0.41
22:DA:777:G:N3	22:DA:778:G:C8	2.88	0.41
22:DA:875:G:N2	22:DA:903:C:O2	2.53	0.41
22:DA:1418:G:C2	22:DA:1579:A:N7	2.89	0.41
22:DA:1483:G:H2'	22:DA:1483:G:N3	2.34	0.41
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.56	0.41
22:DA:1799:G:OP2	24:DC:258:ARG:HD2	2.21	0.41
22:DA:1965:C:OP1	22:DA:1966:A:O2'	2.31	0.41
22:DA:2133:G:H2'	22:DA:2157:G:N2	2.34	0.41
22:DA:2212:A:C2	22:DA:2214:C:C4	3.08	0.41
22:DA:2526:G:O2'	52:D4:34:LYS:HE3	2.20	0.41
22:DA:2782:G:C8	22:DA:2782:G:OP2	2.73	0.41
25:DD:46:ARG:O	25:DD:47:ALA:HB2	2.20	0.41
28:DG:94:TYR:HA	28:DG:106:SER:O	2.21	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
35:DN:54:LEU:CD2	35:DN:66:ALA:HB2	2.50	0.41
37:DP:39:ARG:HE	37:DP:39:ARG:HA	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:38:VAL:O	39:DR:38:VAL:CG2	2.67	0.41
41:DT:8:LEU:HD23	41:DT:50:LEU:HD21	2.03	0.41
41:DT:63:VAL:HG12	41:DT:64:LYS:N	2.34	0.41
43:DV:20:LEU:HD22	43:DV:26:PHE:HA	2.02	0.41
45:DX:36:HIS:ND1	45:DX:37:ARG:O	2.53	0.41
1:AA:29:U:O2'	1:AA:30:U:H5'	2.20	0.41
1:AA:49:U:O4	1:AA:365:U:C5	2.73	0.41
1:AA:74:A:H2'	1:AA:75:G:C1'	2.51	0.41
1:AA:406:G:C2	1:AA:407:U:C6	3.08	0.41
1:AA:423:G:H2'	1:AA:424:G:O4'	2.21	0.41
1:AA:452:A:C8	1:AA:452:A:H3'	2.55	0.41
1:AA:596:A:C5	1:AA:645:G:N2	2.88	0.41
1:AA:953:G:H2'	1:AA:954:G:H5'	2.02	0.41
1:AA:989:U:H2'	1:AA:990:C:O5'	2.20	0.41
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.55	0.41
1:AA:1074:G:O3'	2:AB:102:THR:HG22	2.20	0.41
1:AA:1075:U:OP1	2:AB:102:THR:HG21	2.20	0.41
1:AA:1093:A:N3	1:AA:1109:C:O2'	2.41	0.41
1:AA:1242:G:C6	1:AA:1243:C:C4	3.09	0.41
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.21	0.41
1:AA:1342:C:O2'	9:AI:126:GLN:CG	2.68	0.41
1:AA:1441:A:C2'	1:AA:1442:G:O5'	2.65	0.41
2:AB:145:GLU:O	2:AB:149:GLY:N	2.53	0.41
4:AD:4:TYR:O	4:AD:5:LEU:HB2	2.21	0.41
4:AD:161:LEU:HD23	4:AD:162:ALA:N	2.35	0.41
8:AH:43:GLU:HA	8:AH:43:GLU:OE2	2.20	0.41
9:AI:46:MET:SD	9:AI:46:MET:N	2.80	0.41
11:AK:112:ASP:CG	11:AK:114:THR:HG23	2.46	0.41
13:AM:3:ARG:O	13:AM:4:ILE:O	2.38	0.41
13:AM:78:LYS:O	13:AM:79:ARG:C	2.63	0.41
15:AO:67:LEU:HD22	15:AO:88:ARG:NH2	2.35	0.41
15:AO:88:ARG:HB2	15:AO:88:ARG:CZ	2.50	0.41
20:AT:73:ALA:O	20:AT:74:ARG:C	2.64	0.41
22:BA:29:U:H2'	22:BA:30:G:C8	2.55	0.41
22:BA:122:G:C2'	22:BA:123:G:H5'	2.50	0.41
22:BA:880:G:C2	22:BA:898:C:O2	2.73	0.41
22:BA:1406:U:C2'	22:BA:1407:G:O5'	2.68	0.41
22:BA:1413:A:H2'	22:BA:1414:C:O4'	2.21	0.41
22:BA:1445:G:C5	22:BA:1446:C:C4	3.08	0.41
22:BA:1588:G:C4	22:BA:1589:U:C5	3.09	0.41
22:BA:1971:U:OP2	22:BA:1971:U:H4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2130:U:OP2	22:BA:2132:U:O4	2.38	0.41
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.21	0.41
24:BC:79:GLU:N	24:BC:93:LEU:O	2.51	0.41
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.50	0.41
25:BD:30:GLU:O	25:BD:31:ALA:C	2.63	0.41
27:BF:146:VAL:HG23	27:BF:146:VAL:O	2.20	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
35:BN:25:ALA:HB1	35:BN:48:VAL:HG22	2.03	0.41
38:BQ:68:ALA:O	38:BQ:69:ALA:C	2.64	0.41
41:BT:65:GLY:N	41:BT:79:ASP:OD1	2.41	0.41
46:BY:5:GLU:HG3	46:BY:56:LEU:HD11	2.01	0.41
1:CA:81:A:C2	1:CA:89:U:C2	3.08	0.41
1:CA:442:G:C6	1:CA:443:C:N4	2.89	0.41
1:CA:1062:U:O4	3:CC:3:GLN:HG3	2.21	0.41
1:CA:1309:G:C6	1:CA:1329:A:N1	2.88	0.41
1:CA:1478:U:C2	1:CA:1479:C:C5	3.09	0.41
1:CA:1503:A:C4	1:CA:1531:A:N3	2.89	0.41
2:CB:117:LEU:O	2:CB:118:GLU:C	2.63	0.41
3:CC:40:ARG:HA	3:CC:55:ILE:CD1	2.51	0.41
5:CE:36:LEU:HD21	5:CE:137:VAL:CG1	2.51	0.41
5:CE:76:LEU:H	5:CE:76:LEU:HD12	1.84	0.41
18:CR:59:ILE:HG22	18:CR:63:ARG:HD2	2.03	0.41
21:CU:40:LYS:HB3	21:CU:41:PRO:HD3	2.02	0.41
22:DA:176:A:N7	22:DA:177:G:C6	2.88	0.41
22:DA:277:G:H1'	22:DA:361:G:O6	2.20	0.41
22:DA:299:A:N7	22:DA:300:A:C6	2.89	0.41
22:DA:355:U:H2'	22:DA:356:G:C8	2.55	0.41
22:DA:491:G:C5	22:DA:492:A:C5	3.08	0.41
22:DA:673:C:H5"	26:DE:76:PRO:HD2	2.02	0.41
22:DA:771:G:C6	22:DA:772:C:C5	3.09	0.41
22:DA:836:G:C6	22:DA:837:C:C4	3.08	0.41
22:DA:900:A:C2'	22:DA:901:C:H5'	2.51	0.41
22:DA:1176:U:C4	22:DA:1177:G:C6	3.08	0.41
22:DA:1177:G:H2'	22:DA:1178:C:C4'	2.50	0.41
22:DA:1253:A:O2'	22:DA:1254:A:H5'	2.21	0.41
22:DA:1298:C:N4	22:DA:1299:G:C6	2.88	0.41
22:DA:1362:C:C4	22:DA:1363:C:C5	3.08	0.41
22:DA:1444:G:N2	22:DA:1548:A:N3	2.68	0.41
22:DA:1526:C:H2'	22:DA:1527:G:O5'	2.20	0.41
22:DA:1775:U:P	57:DA:3444:HOH:O	2.78	0.41
22:DA:1936:A:H2	22:DA:1943:U:N3	2.16	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2024:G:C2	22:DA:2040:G:N3	2.88	0.41
22:DA:2134:A:C2	22:DA:2135:A:C4	3.09	0.41
22:DA:2235:G:C5	22:DA:2236:U:C5	3.08	0.41
22:DA:2330:G:N2	22:DA:2386:A:C4	2.88	0.41
22:DA:2378:A:N7	22:DA:2379:G:H1'	2.35	0.41
22:DA:2421:G:N7	51:D3:31:HIS:CD2	2.88	0.41
22:DA:2478:A:C8	22:DA:2529:G:N7	2.88	0.41
22:DA:2506:U:O4	22:DA:2585:U:O4	2.38	0.41
22:DA:2727:A:N1	22:DA:2728:U:C4	2.88	0.41
22:DA:2839:G:C5	22:DA:2840:C:C5	3.08	0.41
23:DB:56:G:H4'	23:DB:57:A:OP1	2.21	0.41
23:DB:90:C:H5'	34:DM:18:ARG:HG2	2.01	0.41
24:DC:68:LYS:CG	24:DC:151:GLY:HA2	2.50	0.41
24:DC:132:MET:HE3	24:DC:172:VAL:HG21	2.01	0.41
26:DE:52:VAL:O	26:DE:74:LYS:HD3	2.21	0.41
27:DF:10:ASP:CG	27:DF:11:GLU:N	2.79	0.41
30:DI:46:THR:CG2	30:DI:51:LYS:HG3	2.50	0.41
30:DI:91:GLY:O	30:DI:93:PRO:HD3	2.21	0.41
30:DI:121:ASP:O	30:DI:124:ALA:HB3	2.20	0.41
39:DR:12:HIS:CE1	39:DR:22:LEU:HD22	2.55	0.41
41:DT:34:VAL:HG22	41:DT:81:LYS:O	2.21	0.41
42:DU:96:PHE:CZ	42:DU:103:ILE:HG13	2.56	0.41
43:DV:42:LEU:HD23	43:DV:42:LEU:N	2.36	0.41
45:DX:69:ALA:O	45:DX:71:LEU:N	2.53	0.41
50:D2:31:LEU:HD21	50:D2:43:THR:CG2	2.50	0.41
1:AA:124:C:C2'	1:AA:125:U:H5'	2.51	0.41
1:AA:125:U:C2'	1:AA:126:G:H5'	2.50	0.41
1:AA:283:U:C4	1:AA:284:C:C4	3.09	0.41
1:AA:418:C:N4	57:AA:1718:HOH:O	2.53	0.41
1:AA:946:A:C2	1:AA:1236:A:C2	3.09	0.41
1:AA:1313:U:O4	1:AA:1314:C:N4	2.53	0.41
1:AA:1379:G:C5	1:AA:1380:U:C5	3.09	0.41
3:AC:7:PRO:O	3:AC:11:ARG:HG3	2.20	0.41
4:AD:2:ALA:O	4:AD:68:LEU:CD2	2.68	0.41
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	2.01	0.41
5:AE:151:GLU:O	5:AE:154:ALA:N	2.50	0.41
6:AF:49:TYR:CD1	6:AF:49:TYR:O	2.73	0.41
7:AG:24:ALA:HA	7:AG:27:VAL:HG22	2.02	0.41
8:AH:64:LYS:CB	8:AH:71:VAL:HG21	2.50	0.41
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.85	0.41
12:AL:42:PRO:HA	12:AL:89:ASP:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:109:ASP:O	12:AL:110:ARG:C	2.64	0.41
22:BA:31:C:C2'	22:BA:32:C:H5'	2.50	0.41
22:BA:226:A:C6	22:BA:227:A:C6	3.08	0.41
22:BA:528:A:C8	22:BA:528:A:C4'	3.03	0.41
22:BA:846:U:C2'	22:BA:847:U:OP2	2.68	0.41
22:BA:910:A:C6	22:BA:911:A:C6	3.09	0.41
22:BA:996:A:H4'	38:BQ:91:ASP:OD2	2.20	0.41
22:BA:1047:G:C2	22:BA:1110:G:C4	3.08	0.41
22:BA:1171:G:N2	22:BA:1179:G:C6	2.89	0.41
22:BA:1269:A:O5'	22:BA:1269:A:H8	2.04	0.41
22:BA:1444:G:H2'	22:BA:1445:G:C8	2.55	0.41
22:BA:1677:A:C2	22:BA:1678:A:C4	3.08	0.41
22:BA:1952:A:C6	22:BA:1953:A:C6	3.09	0.41
22:BA:2209:G:C2	22:BA:2216:G:C2	3.08	0.41
22:BA:2309:A:C6	22:BA:2310:C:C4	3.09	0.41
22:BA:2888:C:C2	22:BA:2889:C:C5	3.08	0.41
24:BC:97:LYS:HA	24:BC:97:LYS:HE3	2.03	0.41
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.36	0.41
26:BE:189:THR:HG22	26:BE:191:ASP:N	2.36	0.41
27:BF:28:VAL:O	27:BF:28:VAL:CG1	2.69	0.41
27:BF:122:PHE:CE2	27:BF:128:TYR:HB2	2.56	0.41
27:BF:158:THR:HG22	27:BF:160:ALA:N	2.36	0.41
33:BL:14:LYS:HD3	33:BL:15:ALA:HB3	2.02	0.41
33:BL:95:LEU:O	33:BL:100:ILE:HG23	2.21	0.41
38:BQ:87:SER:CB	39:BR:51:VAL:HA	2.50	0.41
50:B2:24:THR:O	50:B2:25:LYS:C	2.64	0.41
53:B5:100:ILE:HG23	53:B5:104:ILE:CB	2.50	0.41
1:CA:64:G:C2	1:CA:67:C:C4	3.09	0.41
1:CA:428:G:C5	1:CA:430:A:C6	3.09	0.41
1:CA:702:A:C6	22:DA:1848:A:C6	3.09	0.41
1:CA:978:A:O2'	1:CA:1322:C:C5	2.69	0.41
1:CA:1262:C:C2'	1:CA:1263:C:H5'	2.50	0.41
3:CC:9:GLY:HA3	14:CN:89:MET:SD	2.59	0.41
3:CC:80:LYS:HE3	3:CC:80:LYS:HA	2.02	0.41
3:CC:140:ASN:HA	3:CC:143:ARG:HB3	2.03	0.41
4:CD:4:TYR:CE2	4:CD:11:LEU:HD11	2.55	0.41
4:CD:28:ILE:O	4:CD:31:LYS:NZ	2.53	0.41
4:CD:40:GLN:OE1	4:CD:41:HIS:NE2	2.53	0.41
5:CE:89:HIS:CD2	5:CE:90:THR:OG1	2.73	0.41
9:CI:33:ARG:HD3	9:CI:33:ARG:HA	1.84	0.41
11:CK:36:ASP:CG	11:CK:40:ASN:HB2	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:91:GLY:O	14:CN:92:GLU:C	2.63	0.41
21:CU:28:VAL:O	21:CU:32:VAL:HG23	2.21	0.41
22:DA:55:G:C6	22:DA:116:C:N3	2.88	0.41
22:DA:167:A:H2'	22:DA:168:G:O4'	2.21	0.41
22:DA:391:A:C4	22:DA:392:U:C6	3.08	0.41
22:DA:614:A:H4'	22:DA:616:A:N7	2.35	0.41
22:DA:704:G:H1'	22:DA:726:G:H22	1.86	0.41
22:DA:708:G:N2	22:DA:724:U:H1'	2.35	0.41
22:DA:785:G:O2'	22:DA:1779:U:C5'	2.69	0.41
22:DA:942:G:H2'	22:DA:943:A:H5'	2.03	0.41
22:DA:1022:G:C5	22:DA:1140:C:C4	3.09	0.41
22:DA:1169:A:C6	22:DA:1180:U:O4	2.74	0.41
22:DA:1343:G:C5	22:DA:1344:U:C4	3.09	0.41
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.56	0.41
22:DA:1593:A:C2	22:DA:1594:U:C2	3.08	0.41
22:DA:2094:A:C2	22:DA:2196:C:C2	3.08	0.41
22:DA:2095:A:H2'	22:DA:2096:C:C6	2.56	0.41
22:DA:2107:G:C6	22:DA:2183:A:N1	2.89	0.41
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.51	0.41
22:DA:2331:G:N2	22:DA:2385:C:C2	2.88	0.41
22:DA:2631:G:C6	22:DA:2632:A:N7	2.89	0.41
29:DH:76:GLU:O	29:DH:76:GLU:CD	2.63	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
32:DK:31:ARG:HB2	32:DK:32:TYR:CD1	2.55	0.41
35:DN:37:THR:HG22	35:DN:110:MET:HE1	2.03	0.41
35:DN:90:ARG:HD3	35:DN:94:TYR:HA	2.01	0.41
39:DR:80:ARG:C	39:DR:82:HIS:N	2.77	0.41
1:AA:64:G:N2	1:AA:67:C:C4	2.88	0.41
1:AA:251:G:C6	1:AA:266:G:O6	2.73	0.41
1:AA:604:G:C5	1:AA:605:U:C4	3.09	0.41
1:AA:659:U:H2'	1:AA:660:C:C6	2.56	0.41
1:AA:1186:G:N2	1:AA:1187:G:H1'	2.35	0.41
1:AA:1191:A:OP1	3:AC:4:LYS:HD3	2.21	0.41
1:AA:1299:A:N3	1:AA:1299:A:C2'	2.78	0.41
1:AA:1436:U:H2'	1:AA:1437:A:C8	2.55	0.41
3:AC:73:PRO:CG	3:AC:105:GLU:HG3	2.51	0.41
3:AC:97:VAL:CB	3:AC:98:PRO:HD2	2.51	0.41
3:AC:206:GLU:C	3:AC:207:ILE:O	2.64	0.41
5:AE:63:ALA:O	5:AE:64:MET:C	2.64	0.41
8:AH:34:VAL:O	8:AH:35:ALA:C	2.62	0.41
9:AI:118:LEU:HD23	9:AI:122:ARG:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:17:LEU:HD21	10:AJ:96:VAL:CG2	2.51	0.41
15:AO:39:LEU:O	15:AO:41:GLY:N	2.54	0.41
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.19	0.41
19:AS:45:ILE:HG23	19:AS:63:THR:HA	2.03	0.41
20:AT:44:LYS:CG	20:AT:87:ALA:HA	2.51	0.41
22:BA:247:G:H4'	22:BA:386:G:C5	2.55	0.41
22:BA:528:A:H8	22:BA:528:A:C3'	2.25	0.41
22:BA:918:A:H4'	23:BB:97:C:O2	2.19	0.41
22:BA:973:A:H5'	22:BA:1188:U:H1'	2.03	0.41
22:BA:1051:G:C6	22:BA:1052:C:C4	3.08	0.41
22:BA:1248:G:OP1	26:BE:44:ARG:NH1	2.54	0.41
22:BA:1678:A:H2'	22:BA:1679:A:C5'	2.50	0.41
22:BA:1786:A:C5	22:BA:1938:A:C2	3.09	0.41
22:BA:1828:G:H5"	57:BA:3454:HOH:O	2.20	0.41
22:BA:1876:A:C6	22:BA:1877:A:C5	3.09	0.41
22:BA:1936:A:H2	22:BA:1943:U:N3	2.13	0.41
22:BA:2380:C:C2	22:BA:2381:A:C8	3.09	0.41
22:BA:2415:G:C5	22:BA:2416:C:C5	3.08	0.41
22:BA:2419:U:OP2	51:B3:33:LEU:HD13	2.20	0.41
22:BA:2885:G:H2'	22:BA:2886:A:C4'	2.51	0.41
22:BA:2886:A:C5	22:BA:2887:A:N7	2.88	0.41
28:BG:25:THR:C	28:BG:26:ILE:HG12	2.45	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
30:BI:19:ASN:N	30:BI:20:PRO:HD3	2.36	0.41
33:BL:55:MET:HA	33:BL:56:PRO:HD3	1.95	0.41
35:BN:79:LEU:HA	35:BN:83:LEU:HB2	2.03	0.41
43:BV:80:HIS:CD2	43:BV:83:LYS:HG3	2.55	0.41
44:BW:36:ILE:HG23	44:BW:58:THR:HG23	2.02	0.41
45:BX:15:GLY:C	45:BX:27:ARG:HG2	2.45	0.41
53:B5:68:GLY:O	53:B5:69:LEU:HB2	2.20	0.41
1:CA:32:A:C2	1:CA:33:A:C4	3.08	0.41
1:CA:32:A:N1	1:CA:33:A:C6	2.89	0.41
1:CA:82:G:N2	1:CA:88:U:O2	2.54	0.41
1:CA:283:U:C4	1:CA:284:C:C4	3.08	0.41
1:CA:325:A:N6	1:CA:326:G:C6	2.89	0.41
1:CA:386:C:C5	1:CA:387:U:C5	3.08	0.41
1:CA:496:A:H2'	1:CA:497:G:N7	2.35	0.41
1:CA:806:C:O2'	1:CA:807:A:H5'	2.20	0.41
1:CA:1130:A:C1'	1:CA:1146:A:C2	3.04	0.41
1:CA:1250:A:O3'	9:CI:69:GLY:HA2	2.21	0.41
1:CA:1272:G:O2'	1:CA:1273:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1408:A:C2	1:CA:1494:G:C2	3.08	0.41
1:CA:1434:A:N6	1:CA:1435:G:C6	2.88	0.41
1:CA:1505:G:C5'	1:CA:1506:U:O5'	2.68	0.41
2:CB:154:MET:SD	2:CB:156:GLY:O	2.78	0.41
3:CC:102:ASN:C	3:CC:103:ILE:HG13	2.44	0.41
4:CD:151:LYS:O	4:CD:152:GLN:OE1	2.38	0.41
5:CE:72:ILE:HD13	5:CE:145:GLU:CD	2.44	0.41
5:CE:137:VAL:HA	5:CE:140:THR:OG1	2.21	0.41
6:CF:41:ASP:OD1	6:CF:43:GLY:N	2.54	0.41
11:CK:88:GLY:H	11:CK:114:THR:HG22	1.85	0.41
12:CL:116:LYS:O	12:CL:117:TYR:CB	2.68	0.41
18:CR:33:ILE:O	18:CR:33:ILE:HG12	2.21	0.41
20:CT:67:ILE:CG1	20:CT:71:LYS:HE2	2.51	0.41
22:DA:1:G:C2	22:DA:2:G:C4	3.09	0.41
22:DA:145:C:H2'	22:DA:146:A:C8	2.56	0.41
22:DA:182:A:H2'	22:DA:183:C:C6	2.55	0.41
22:DA:193:U:H4'	22:DA:803:U:H5'	2.03	0.41
22:DA:304:U:H2'	22:DA:305:C:C6	2.55	0.41
22:DA:460:A:H2'	22:DA:461:C:O4'	2.21	0.41
22:DA:668:A:H3'	22:DA:669:G:H5"	2.02	0.41
22:DA:675:A:H4'	26:DE:62:GLN:OE1	2.21	0.41
22:DA:936:A:H2'	22:DA:937:C:C6	2.56	0.41
22:DA:1744:A:C5	22:DA:1745:A:C5	3.09	0.41
22:DA:2040:G:C2	22:DA:2041:U:C2	3.08	0.41
22:DA:2087:G:C2	22:DA:2233:U:O2	2.73	0.41
22:DA:2107:G:N1	22:DA:2183:A:C2	2.88	0.41
22:DA:2283:C:C5	22:DA:2389:G:C4	3.09	0.41
22:DA:2335:A:OP1	36:DO:13:ARG:HD2	2.21	0.41
22:DA:2355:G:C6	22:DA:2356:U:C4	3.09	0.41
22:DA:2499:C:C4	22:DA:2500:U:O4	2.74	0.41
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.21	0.41
23:DB:58:A:N7	23:DB:59:A:C5	2.88	0.41
30:DI:14:ALA:C	30:DI:16:GLY:H	2.27	0.41
36:DO:28:VAL:HG11	36:DO:92:PHE:CZ	2.56	0.41
40:DS:70:LYS:N	40:DS:70:LYS:HD2	2.36	0.41
45:DX:64:ILE:HD11	45:DX:68:LEU:HD11	2.02	0.41
1:AA:40:C:O2	1:AA:40:C:H2'	2.20	0.41
1:AA:91:U:C5	1:AA:92:U:C5	3.08	0.41
1:AA:132:C:H2'	1:AA:133:U:O4'	2.21	0.41
1:AA:406:G:C4	1:AA:495:A:C5	3.09	0.41
1:AA:453:G:C2'	1:AA:454:G:O5'	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:616:G:C2	1:AA:617:G:C8	3.09	0.41
1:AA:665:A:C2	1:AA:732:C:C5	3.09	0.41
1:AA:934:C:H5"	57:AA:1767:HOH:O	2.20	0.41
1:AA:1106:G:C6	1:AA:1107:C:C4	3.09	0.41
1:AA:1272:G:C5	1:AA:1273:C:C4	3.09	0.41
1:AA:1311:A:H2'	1:AA:1312:G:O5'	2.19	0.41
4:AD:29:ASP:O	4:AD:31:LYS:CD	2.66	0.41
9:AI:49:ARG:O	9:AI:50:GLN:C	2.64	0.41
10:AJ:66:GLU:HB3	14:AN:99:ALA:HB2	2.02	0.41
10:AJ:87:LEU:HD13	10:AJ:88:MET:N	2.35	0.41
12:AL:95:TYR:CD1	12:AL:95:TYR:N	2.88	0.41
13:AM:80:LEU:HD21	13:AM:87:ARG:NE	2.36	0.41
14:AN:64:CYS:HB2	14:AN:80:SER:HB3	2.02	0.41
16:AP:46:LYS:HD3	16:AP:46:LYS:C	2.45	0.41
20:AT:68:HIS:C	20:AT:69:LYS:HG3	2.42	0.41
22:BA:116:C:H2'	22:BA:117:G:O4'	2.21	0.41
22:BA:254:G:N7	51:B3:5:LYS:HE2	2.35	0.41
22:BA:447:A:C4	22:BA:473:G:N7	2.89	0.41
22:BA:511:U:C5	22:BA:512:G:N7	2.89	0.41
22:BA:547:A:H3'	22:BA:548:G:C5'	2.51	0.41
22:BA:563:A:C2	22:BA:564:C:N1	2.88	0.41
22:BA:974:G:H8	22:BA:990:A:H62	1.68	0.41
22:BA:1057:A:N3	22:BA:1086:A:C2	2.88	0.41
22:BA:1067:A:N3	22:BA:1067:A:H2'	2.35	0.41
22:BA:1366:A:C5	22:BA:1367:A:C8	3.08	0.41
22:BA:1536:C:H4'	22:BA:1537:G:H5"	2.03	0.41
22:BA:1719:G:N2	22:BA:1720:U:H1'	2.35	0.41
22:BA:1773:A:C2'	22:BA:1774:C:H5'	2.50	0.41
22:BA:2115:G:O2'	22:BA:2116:G:C8	2.72	0.41
22:BA:2218:G:O2'	22:BA:2219:U:H5'	2.21	0.41
22:BA:2253:G:C5	22:BA:2254:C:C5	3.08	0.41
22:BA:2488:G:O2'	22:BA:2489:U:H5'	2.21	0.41
23:BB:7:G:H5"	36:BO:29:HIS:CE1	2.56	0.41
28:BG:86:LYS:HG2	28:BG:132:VAL:HG22	2.02	0.41
29:BH:10:ALA:C	29:BH:12:LEU:H	2.27	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.49	0.41
30:BI:141:GLU:N	30:BI:141:GLU:CD	2.79	0.41
38:BQ:57:PHE:O	38:BQ:58:ARG:C	2.64	0.41
39:BR:48:LYS:HE2	39:BR:48:LYS:HB3	1.64	0.41
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B3:63:PRO:HG2	51:B3:64:TYR:CD2	2.56	0.41
1:CA:461:A:H2'	1:CA:462:G:O4'	2.21	0.41
1:CA:597:G:H2'	1:CA:598:U:H5'	2.01	0.41
1:CA:1106:G:H2'	1:CA:1107:C:H6	1.86	0.41
1:CA:1149:C:C4	1:CA:1150:A:C6	3.08	0.41
1:CA:1211:U:O4'	1:CA:1213:A:C2	2.74	0.41
1:CA:1397:C:O2	1:CA:1397:C:O4'	2.38	0.41
2:CB:210:VAL:HG22	2:CB:211:THR:N	2.33	0.41
5:CE:41:ASP:C	5:CE:43:ASN:H	2.28	0.41
8:CH:91:GLU:O	8:CH:92:LEU:C	2.63	0.41
15:CO:60:VAL:O	15:CO:63:ARG:HB3	2.21	0.41
15:CO:70:LEU:HD22	15:CO:78:TYR:HB2	2.01	0.41
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	2.02	0.41
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.84	0.41
22:DA:193:U:C5	22:DA:194:G:N7	2.89	0.41
22:DA:291:G:H2'	22:DA:292:U:C6	2.55	0.41
22:DA:495:G:H4'	40:DS:4:ILE:O	2.21	0.41
22:DA:503:A:C6	22:DA:506:G:C6	3.09	0.41
22:DA:535:G:O2'	38:DQ:53:ARG:HG3	2.21	0.41
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.55	0.41
22:DA:1312:U:N3	22:DA:1603:A:C6	2.88	0.41
22:DA:1838:C:C4	22:DA:1899:A:C4	3.09	0.41
22:DA:2229:U:H2'	22:DA:2230:G:C8	2.56	0.41
22:DA:2553:G:H2'	22:DA:2554:U:O4'	2.21	0.41
22:DA:2727:A:C6	22:DA:2728:U:C4	3.08	0.41
22:DA:2733:A:C2	22:DA:2734:A:C4	3.09	0.41
22:DA:2805:C:H2'	22:DA:2806:C:C6	2.55	0.41
24:DC:107:PRO:HB3	24:DC:142:HIS:NE2	2.36	0.41
24:DC:129:THR:HG23	24:DC:190:ALA:O	2.20	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
30:DI:20:PRO:HB2	30:DI:23:PRO:CG	2.51	0.41
34:DM:76:LYS:NZ	34:DM:83:GLY:O	2.52	0.41
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.36	0.41
40:DS:7:HIS:CE1	40:DS:46:LEU:HD23	2.55	0.41
41:DT:18:GLU:O	41:DT:22:THR:OG1	2.39	0.41
41:DT:51:PHE:O	41:DT:52:GLU:C	2.64	0.41
45:DX:28:ARG:O	45:DX:29:PHE:CD1	2.74	0.41
1:AA:167:A:H2'	1:AA:168:G:C1'	2.51	0.41
1:AA:189:A:N6	1:AA:190:A:N1	2.68	0.41
1:AA:209:U:C5'	1:AA:210:C:OP2	2.69	0.41
1:AA:303:A:O2'	1:AA:304:U:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:406:G:C2	1:AA:407:U:C5	3.08	0.41
1:AA:411:A:OP2	4:AD:26:ARG:NH2	2.51	0.41
1:AA:437:U:N3	1:AA:438:U:C5	2.89	0.41
1:AA:469:C:C4	1:AA:470:C:C4	3.09	0.41
1:AA:469:C:C5	1:AA:470:C:C5	3.09	0.41
1:AA:542:G:H2'	1:AA:543:U:H6	1.86	0.41
1:AA:575:G:C6	1:AA:821:G:N7	2.89	0.41
1:AA:587:G:N2	1:AA:755:G:C8	2.88	0.41
1:AA:672:U:O2'	1:AA:673:A:O5'	2.39	0.41
1:AA:832:G:N2	1:AA:833:G:H1'	2.36	0.41
1:AA:858:G:C2'	1:AA:859:G:H5'	2.50	0.41
1:AA:875:U:C4	1:AA:876:C:C5	3.09	0.41
1:AA:945:G:H2'	1:AA:945:G:N3	2.36	0.41
1:AA:977:A:C8	1:AA:1223:C:C2	3.09	0.41
1:AA:1053:G:C6	1:AA:1199:U:C2	3.08	0.41
1:AA:1124:G:P	10:AJ:38:GLY:HA3	2.60	0.41
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.55	0.41
1:AA:1476:A:H2'	1:AA:1477:U:O4'	2.21	0.41
1:AA:1501:C:C4	1:AA:1504:G:C5	3.08	0.41
1:AA:1539:C:H5"	21:AU:18:ARG:CG	2.50	0.41
2:AB:207:ILE:N	2:AB:207:ILE:CD1	2.84	0.41
2:AB:210:VAL:HG23	2:AB:211:THR:N	2.36	0.41
3:AC:64:ILE:HG22	3:AC:98:PRO:O	2.20	0.41
4:AD:25:VAL:O	4:AD:26:ARG:C	2.63	0.41
4:AD:124:MET:HG3	4:AD:146:ARG:HG2	2.02	0.41
4:AD:160:GLU:C	4:AD:162:ALA:H	2.29	0.41
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.36	0.41
5:AE:94:VAL:HG22	5:AE:95:PHE:N	2.35	0.41
5:AE:101:GLU:O	5:AE:101:GLU:CG	2.68	0.41
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.67	0.41
6:AF:8:PHE:CZ	6:AF:60:VAL:HG11	2.55	0.41
6:AF:90:MET:SD	18:AR:61:ARG:CZ	3.09	0.41
6:AF:92:THR:C	6:AF:93:LYS:HD3	2.46	0.41
7:AG:4:ARG:O	7:AG:5:ARG:C	2.63	0.41
8:AH:41:LYS:CD	8:AH:48:ASP:HA	2.51	0.41
9:AI:57:MET:O	9:AI:58:VAL:HB	2.20	0.41
9:AI:85:ARG:O	9:AI:88:MET:HB2	2.21	0.41
10:AJ:7:ARG:HD3	10:AJ:73:LEU:HD21	2.03	0.41
10:AJ:10:LEU:O	10:AJ:71:LEU:HD13	2.20	0.41
12:AL:114:ARG:CZ	12:AL:114:ARG:HB2	2.51	0.41
13:AM:15:ALA:HB1	13:AM:34:LEU:HD21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:20:THR:HA	13:AM:25:VAL:CG2	2.50	0.41
13:AM:44:LYS:HE2	13:AM:44:LYS:HB3	1.91	0.41
13:AM:78:LYS:HA	13:AM:81:MET:HE3	2.03	0.41
14:AN:46:LEU:C	14:AN:46:LEU:CD1	2.92	0.41
15:AO:32:LEU:HD13	15:AO:63:ARG:HB2	2.02	0.41
15:AO:61:SER:O	15:AO:65:LYS:HG3	2.21	0.41
15:AO:70:LEU:HD21	15:AO:77:ARG:HB2	2.03	0.41
16:AP:39:PHE:CD1	16:AP:39:PHE:C	2.97	0.41
17:AQ:16:LYS:C	17:AQ:17:MET:HE3	2.46	0.41
18:AR:22:ASP:OD1	18:AR:24:LYS:HB2	2.19	0.41
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	2.03	0.41
20:AT:62:ALA:O	20:AT:63:ALA:C	2.63	0.41
20:AT:84:ASN:HA	20:AT:87:ALA:HB3	2.03	0.41
22:BA:77:G:H2'	22:BA:78:U:O4'	2.20	0.41
22:BA:229:C:C2	22:BA:230:G:H1'	2.55	0.41
22:BA:285:G:N2	22:BA:286:U:H1'	2.36	0.41
22:BA:397:U:OP2	45:BX:10:LYS:HD3	2.21	0.41
22:BA:476:G:C2	22:BA:479:A:C8	3.08	0.41
22:BA:588:U:O4	22:BA:670:A:H1'	2.21	0.41
22:BA:601:C:O2	22:BA:605:G:H4'	2.21	0.41
22:BA:653:U:C2'	22:BA:654:A:OP1	2.69	0.41
22:BA:734:A:C5	22:BA:735:A:C8	3.09	0.41
22:BA:892:A:H2'	22:BA:892:A:N3	2.35	0.41
22:BA:996:A:N6	22:BA:1160:G:C6	2.89	0.41
22:BA:1288:G:C5	22:BA:1327:A:C2	3.09	0.41
22:BA:1365:A:P	45:BX:28:ARG:HH22	2.44	0.41
22:BA:1429:G:C2	22:BA:1430:G:C5	3.09	0.41
22:BA:1569:A:N6	22:BA:1570:A:C6	2.89	0.41
22:BA:1583:A:HO2'	22:BA:1584:U:P	2.44	0.41
22:BA:1769:U:O4'	22:BA:1958:C:H5"	2.21	0.41
22:BA:1810:A:C8	22:BA:1811:G:C8	3.09	0.41
22:BA:1855:U:C4	22:BA:1856:U:C4	3.08	0.41
22:BA:1877:A:H2'	22:BA:1878:G:O4'	2.21	0.41
22:BA:2033:A:O2'	22:BA:2035:G:OP2	2.31	0.41
22:BA:2092:U:H4'	29:BH:24:GLY:HA3	2.03	0.41
22:BA:2151:U:H2'	22:BA:2152:G:C8	2.56	0.41
22:BA:2210:U:H4'	22:BA:2211:A:H5'	2.02	0.41
22:BA:2296:U:C2	22:BA:2333:A:H2	2.38	0.41
22:BA:2298:A:H61	22:BA:2318:G:H1'	1.85	0.41
22:BA:2311:A:C8	27:BF:77:PHE:CD2	3.08	0.41
22:BA:2352:A:C2	22:BA:2366:A:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2489:U:C2'	22:BA:2490:G:O5'	2.69	0.41
22:BA:2525:G:C2	22:BA:2526:G:C8	3.09	0.41
22:BA:2880:C:N3	22:BA:2881:U:C5	2.89	0.41
23:BB:63:C:O2'	23:BB:64:G:H5'	2.21	0.41
23:BB:106:G:H2'	23:BB:107:G:O4'	2.20	0.41
24:BC:56:GLY:O	24:BC:215:GLY:HA2	2.21	0.41
25:BD:37:VAL:HG12	25:BD:38:LYS:N	2.36	0.41
26:BE:106:LYS:HD2	26:BE:200:LEU:HB3	2.03	0.41
27:BF:57:LEU:HD21	27:BF:152:LEU:HD11	2.03	0.41
27:BF:133:ARG:O	27:BF:134:GLU:CB	2.67	0.41
29:BH:75:LEU:C	29:BH:75:LEU:CD2	2.93	0.41
29:BH:89:LYS:HB3	1:CA:359:G:C5'	2.51	0.41
32:BK:92:GLU:HG3	32:BK:111:LYS:HZ2	1.85	0.41
34:BM:105:MET:HG2	34:BM:106:ASP:N	2.35	0.41
35:BN:14:SER:HA	35:BN:17:ARG:NH1	2.36	0.41
38:BQ:24:TYR:O	38:BQ:25:TYR:HB3	2.17	0.41
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	2.01	0.41
40:BS:65:ASP:OD1	40:BS:67:ASP:HB2	2.21	0.41
43:BV:4:ILE:HG13	43:BV:50:MET:HE1	2.01	0.41
50:B2:22:MET:HE2	50:B2:31:LEU:CD1	2.50	0.41
50:B2:23:ALA:C	50:B2:24:THR:CG2	2.94	0.41
53:B5:50:ILE:HG22	53:B5:51:ASP:H	1.83	0.41
1:CA:45:G:H5"	1:CA:307:C:O2'	2.21	0.41
1:CA:191:G:O6	1:CA:192:A:N6	2.54	0.41
1:CA:420:U:O2'	1:CA:423:G:O6	2.33	0.41
1:CA:445:G:N3	1:CA:445:G:H2'	2.34	0.41
1:CA:485:U:O2'	1:CA:486:U:OP1	2.37	0.41
1:CA:542:G:C2	1:CA:543:U:C6	3.09	0.41
1:CA:762:U:H6	1:CA:762:U:O5'	2.04	0.41
1:CA:780:A:C2	1:CA:803:G:N1	2.89	0.41
1:CA:992:U:C6	1:CA:1043:G:C8	3.08	0.41
1:CA:1095:U:O2	1:CA:1095:U:H2'	2.20	0.41
1:CA:1220:G:H2'	1:CA:1221:G:O4'	2.20	0.41
1:CA:1244:G:C6	1:CA:1245:C:C4	3.09	0.41
1:CA:1316:G:H1	19:CS:5:LEU:HD11	1.86	0.41
1:CA:1381:U:C5	1:CA:1382:C:C5	3.09	0.41
1:CA:1415:G:C2	1:CA:1486:G:C4	3.08	0.41
1:CA:1423:G:O2'	1:CA:1424:U:H5'	2.21	0.41
2:CB:53:ALA:C	2:CB:54:LEU:HD22	2.46	0.41
2:CB:89:GLN:OE1	2:CB:221:VAL:HB	2.19	0.41
2:CB:96:TRP:HZ3	2:CB:175:GLU:OE2	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:206:ALA:O	2:CB:210:VAL:HG13	2.21	0.41
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.20	0.41
4:CD:160:GLU:O	4:CD:163:GLU:HB2	2.21	0.41
5:CE:30:ILE:O	5:CE:30:ILE:HG23	2.21	0.41
5:CE:156:LYS:HD3	8:CH:71:VAL:HG22	2.02	0.41
6:CF:1:MET:HG2	6:CF:65:GLU:HG2	2.03	0.41
6:CF:42:TRP:N	6:CF:42:TRP:CD1	2.86	0.41
6:CF:98:GLU:O	6:CF:99:ALA:HB3	2.19	0.41
8:CH:86:TYR:CE2	8:CH:124:GLU:HB2	2.56	0.41
11:CK:59:THR:CA	11:CK:91:PRO:HB3	2.51	0.41
11:CK:100:LEU:O	11:CK:102:ALA:N	2.54	0.41
12:CL:3:THR:HB	12:CL:6:GLN:HG3	2.02	0.41
13:CM:96:PRO:HA	13:CM:109:ARG:HG2	2.03	0.41
16:CP:23:ASP:O	16:CP:24:SER:C	2.64	0.41
16:CP:53:ASP:OD1	16:CP:56:ARG:HG2	2.20	0.41
18:CR:24:LYS:O	18:CR:26:ILE:HG23	2.20	0.41
20:CT:51:PHE:HA	20:CT:54:MET:HG2	2.03	0.41
20:CT:72:ALA:O	20:CT:73:ALA:C	2.64	0.41
22:DA:24:G:N2	22:DA:517:C:C2	2.89	0.41
22:DA:37:C:H2'	22:DA:38:A:O4'	2.20	0.41
22:DA:88:G:C2	22:DA:89:A:C8	3.09	0.41
22:DA:410:G:H2'	22:DA:2407:A:N7	2.36	0.41
22:DA:458:G:O2'	22:DA:459:U:OP2	2.39	0.41
22:DA:675:A:N3	22:DA:2443:C:O2'	2.41	0.41
22:DA:959:A:H2'	22:DA:960:A:C8	2.56	0.41
22:DA:961:C:C5	22:DA:2031:A:C2	3.08	0.41
22:DA:974:G:O2'	22:DA:989:G:N2	2.52	0.41
22:DA:1083:U:H2'	22:DA:1085:A:OP2	2.21	0.41
22:DA:1095:A:C5	22:DA:1096:A:N1	2.89	0.41
22:DA:1526:C:C2'	22:DA:1527:G:O5'	2.69	0.41
22:DA:1595:C:H2'	22:DA:1596:A:O4'	2.21	0.41
22:DA:1797:G:O2'	24:DC:257:THR:CG2	2.69	0.41
22:DA:1835:G:N3	22:DA:1836:C:C6	2.89	0.41
22:DA:1867:G:O6	22:DA:1875:G:N2	2.53	0.41
22:DA:2061:G:H2'	22:DA:2501:C:O2'	2.20	0.41
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.55	0.41
22:DA:2190:G:O2'	22:DA:2191:A:H5'	2.20	0.41
22:DA:2230:G:C5	22:DA:2231:U:C4	3.09	0.41
22:DA:2549:G:N3	22:DA:2560:A:C2	2.89	0.41
22:DA:2613:U:H5"	57:DA:3478:HOH:O	2.21	0.41
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2873:A:H4'	57:DA:3801:HOH:O	2.21	0.41
24:DC:6:CYS:SG	24:DC:16:VAL:HB	2.61	0.41
24:DC:15:HIS:O	24:DC:204:VAL:CG2	2.69	0.41
24:DC:29:PRO:HG3	24:DC:63:ARG:CZ	2.51	0.41
28:DG:38:ASN:HB3	28:DG:41:VAL:HG23	2.03	0.41
28:DG:71:LEU:O	28:DG:75:MET:HG3	2.21	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
31:DJ:71:ASP:O	31:DJ:73:VAL:CG2	2.69	0.41
35:DN:65:LEU:O	35:DN:65:LEU:HD12	2.21	0.41
36:DO:71:ALA:O	36:DO:75:GLY:N	2.49	0.41
36:DO:83:LEU:HD11	36:DO:114:GLY:O	2.21	0.41
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.84	0.41
42:DU:82:ARG:HB2	42:DU:97:LYS:HG3	2.03	0.41
49:D1:25:LYS:CE	49:D1:30:LYS:O	2.68	0.41
49:D1:47:VAL:HG12	49:D1:48:ILE:N	2.35	0.41
1:AA:201:G:O2'	1:AA:469:C:O2'	2.29	0.41
1:AA:621:A:H2'	1:AA:622:A:C8	2.56	0.41
1:AA:833:G:C2'	1:AA:834:U:H5'	2.51	0.41
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.55	0.41
1:AA:1136:C:O2	1:AA:1136:C:O4'	2.38	0.41
1:AA:1213:A:C5	1:AA:1215:G:C4	3.09	0.41
1:AA:1329:A:H2'	1:AA:1330:U:H5'	2.03	0.41
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.21	0.41
2:AB:96:TRP:HZ3	2:AB:175:GLU:OE2	2.04	0.41
3:AC:140:ASN:O	3:AC:141:ALA:HB2	2.21	0.41
4:AD:177:LYS:O	4:AD:178:MET:HB2	2.21	0.41
5:AE:65:GLU:OE2	5:AE:69:ARG:NH2	2.53	0.41
5:AE:94:VAL:CG2	5:AE:95:PHE:N	2.83	0.41
5:AE:132:ASN:O	5:AE:136:VAL:HG12	2.21	0.41
8:AH:18:GLN:NE2	8:AH:70:ALA:HB1	2.36	0.41
9:AI:105:THR:CG2	9:AI:106:ARG:N	2.84	0.41
9:AI:125:PRO:O	9:AI:126:GLN:C	2.63	0.41
10:AJ:26:VAL:O	10:AJ:29:ALA:HB3	2.20	0.41
10:AJ:32:THR:HG21	10:AJ:83:THR:HA	2.03	0.41
12:AL:4:VAL:O	12:AL:5:ASN:C	2.63	0.41
12:AL:86:ARG:NE	12:AL:88:LYS:HB3	2.35	0.41
14:AN:21:PHE:HA	14:AN:25:ALA:CB	2.50	0.41
16:AP:2:VAL:CG2	16:AP:65:ALA:HB2	2.51	0.41
16:AP:72:ALA:O	16:AP:75:ILE:HG13	2.21	0.41
17:AQ:13:VAL:HG12	17:AQ:22:VAL:O	2.21	0.41
17:AQ:61:ILE:HG22	17:AQ:73:TRP:CE3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:29:LYS:HG2	19:AS:30:PRO:HD2	2.03	0.41
20:AT:21:ASN:O	20:AT:25:ARG:CB	2.69	0.41
21:AU:16:LEU:H	21:AU:18:ARG:NH2	2.18	0.41
21:AU:36:GLU:OE2	21:AU:38:TYR:HD2	2.04	0.41
22:BA:247:G:N7	22:BA:249:C:C2	2.88	0.41
22:BA:303:G:C5	22:BA:304:U:C5	3.09	0.41
22:BA:453:A:H1'	22:BA:457:A:O2'	2.21	0.41
22:BA:481:G:N3	22:BA:507:A:C2	2.87	0.41
22:BA:825:A:H4'	22:BA:2428:G:C5	2.55	0.41
22:BA:1076:C:H2'	22:BA:1077:A:N9	2.36	0.41
22:BA:1177:G:C2'	22:BA:1178:C:O5'	2.69	0.41
22:BA:1301:A:C2	22:BA:1303:G:C6	3.09	0.41
22:BA:1585:C:O2'	22:BA:1586:A:H5'	2.21	0.41
22:BA:2080:A:C5'	45:BX:19:SER:HB2	2.51	0.41
22:BA:2345:G:C5	22:BA:2381:A:N1	2.89	0.41
22:BA:2348:U:O2'	22:BA:2349:G:H5'	2.21	0.41
22:BA:2748:A:C2	22:BA:2757:A:C4	3.08	0.41
22:BA:2786:U:O2'	25:BD:63:PRO:O	2.35	0.41
23:BB:94:A:C5	23:BB:95:U:C5	3.09	0.41
24:BC:40:SER:O	24:BC:42:GLY:N	2.54	0.41
24:BC:57:GLY:HA2	24:BC:213:TRP:HA	2.03	0.41
26:BE:128:ALA:O	26:BE:130:LYS:N	2.53	0.41
27:BF:99:PHE:O	27:BF:100:PHE:C	2.62	0.41
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.41
32:BK:51:LYS:NZ	32:BK:97:THR:HG23	2.36	0.41
32:BK:73:ASP:OD1	32:BK:73:ASP:C	2.61	0.41
33:BL:85:VAL:HG11	33:BL:94:THR:CG2	2.49	0.41
35:BN:16:HIS:O	35:BN:17:ARG:C	2.62	0.41
38:BQ:40:ILE:HG22	38:BQ:41:LYS:N	2.36	0.41
52:B4:3:VAL:HA	52:B4:36:ARG:O	2.20	0.41
1:CA:463:U:O2	1:CA:463:U:H2'	2.20	0.41
1:CA:1213:A:C8	1:CA:1215:G:C6	3.09	0.41
2:CB:29:PRO:HB2	2:CB:30:PHE:CD1	2.56	0.41
3:CC:28:GLU:O	3:CC:32:ASN:HB2	2.21	0.41
3:CC:70:THR:HG21	3:CC:76:VAL:HG21	2.03	0.41
3:CC:148:GLY:O	3:CC:203:PHE:N	2.45	0.41
5:CE:95:PHE:CG	5:CE:96:MET:N	2.89	0.41
5:CE:109:GLY:O	5:CE:110:ALA:CB	2.69	0.41
6:CF:81:ASN:OD1	6:CF:82:ASP:N	2.53	0.41
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.21	0.41
8:CH:51:VAL:O	8:CH:51:VAL:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:26:VAL:HG21	10:CJ:39:PRO:HG3	2.02	0.41
10:CJ:52:LEU:HD23	10:CJ:62:ARG:CG	2.51	0.41
13:CM:102:THR:C	13:CM:104:THR:N	2.77	0.41
17:CQ:15:ASP:HA	17:CQ:21:ILE:CD1	2.50	0.41
21:CU:4:ILE:N	21:CU:4:ILE:HD13	2.36	0.41
21:CU:14:VAL:HG12	21:CU:16:LEU:CG	2.51	0.41
22:DA:42:A:C2	22:DA:438:G:C2	3.09	0.41
22:DA:75:G:H4'	46:DY:48:ARG:NH1	2.36	0.41
22:DA:579:G:C5'	22:DA:2018:G:OP2	2.69	0.41
22:DA:599:A:N3	22:DA:659:G:C2	2.89	0.41
22:DA:607:U:O4	22:DA:620:G:H5'	2.21	0.41
22:DA:635:C:O2'	22:DA:639:U:H5"	2.21	0.41
22:DA:942:G:H4'	22:DA:1190:G:H5'	2.02	0.41
22:DA:945:A:N7	22:DA:2448:A:C2	2.88	0.41
22:DA:1082:U:P	30:DI:124:ALA:HB1	2.61	0.41
22:DA:1197:G:H2'	22:DA:1198:U:H6	1.82	0.41
22:DA:1678:A:C8	22:DA:1679:A:C8	3.09	0.41
22:DA:1835:G:C2	22:DA:1836:C:C6	3.09	0.41
22:DA:2253:G:C6	22:DA:2254:C:C4	3.09	0.41
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	2.53	0.41
22:DA:2327:A:C2	22:DA:2388:A:C2	3.10	0.41
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.86	0.41
23:DB:31:C:H5'	27:DF:26:MET:CE	2.51	0.41
23:DB:46:A:C4	23:DB:47:C:C6	3.09	0.41
25:DD:62:LYS:N	25:DD:63:PRO:CD	2.84	0.41
25:DD:78:GLY:CA	25:DD:80:TRP:CH2	3.04	0.41
25:DD:186:LEU:HD21	37:DP:4:ILE:HG21	2.03	0.41
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.21	0.41
29:DH:96:THR:C	29:DH:98:ASP:N	2.79	0.41
31:DJ:126:ALA:O	31:DJ:127:GLY:O	2.39	0.41
39:DR:76:LYS:HB2	39:DR:85:LYS:HB3	2.03	0.41
41:DT:7:LEU:CD2	41:DT:46:ALA:CA	2.99	0.41
41:DT:21:SER:C	41:DT:23:ALA:N	2.78	0.41
42:DU:39:ILE:O	42:DU:39:ILE:HG22	2.19	0.41
42:DU:61:LYS:HD2	42:DU:61:LYS:HA	1.97	0.41
45:DX:66:THR:O	45:DX:70:GLU:HG3	2.21	0.41
48:D0:33:THR:HG22	48:D0:34:SER:N	2.35	0.41
1:AA:115:G:C2	1:AA:289:G:N7	2.90	0.40
1:AA:342:C:C2	1:AA:348:G:C2	3.09	0.40
1:AA:412:A:H4'	1:AA:413:G:OP1	2.20	0.40
1:AA:597:G:C2	1:AA:644:U:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:735:C:H2'	1:AA:736:C:H6	1.86	0.40
1:AA:1248:A:C2	9:AI:72:ILE:HD11	2.56	0.40
1:AA:1322:C:O2	1:AA:1322:C:O4'	2.39	0.40
1:AA:1346:A:N7	7:AG:10:ARG:NH2	2.69	0.40
3:AC:97:VAL:CB	3:AC:98:PRO:CD	2.98	0.40
6:AF:22:ILE:O	6:AF:23:GLU:C	2.64	0.40
14:AN:30:ILE:HG22	14:AN:35:ASN:OD1	2.21	0.40
14:AN:43:ASN:C	14:AN:45:VAL:H	2.28	0.40
14:AN:46:LEU:C	14:AN:48:LEU:N	2.78	0.40
17:AQ:12:VAL:CG1	17:AQ:13:VAL:N	2.84	0.40
17:AQ:18:GLU:O	17:AQ:19:LYS:CB	2.69	0.40
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.51	0.40
19:AS:51:VAL:HG13	19:AS:71:LEU:HD12	2.03	0.40
20:AT:51:PHE:CD1	20:AT:51:PHE:C	2.98	0.40
22:BA:137:U:P	22:BA:140:C:C5	3.15	0.40
22:BA:163:C:H2'	22:BA:164:C:C6	2.56	0.40
22:BA:222:A:N6	22:BA:231:A:C2	2.89	0.40
22:BA:445:C:O2'	22:BA:449:A:N3	2.53	0.40
22:BA:976:G:N3	22:BA:976:G:H2'	2.36	0.40
22:BA:1151:A:C2	22:BA:1152:C:C2	3.09	0.40
22:BA:1332:G:C6	22:BA:1609:A:C5	3.09	0.40
22:BA:1351:C:O2'	22:BA:1571:A:H1'	2.20	0.40
22:BA:1459:G:C6	22:BA:1461:C:C4	3.10	0.40
22:BA:1854:A:N1	22:BA:2087:G:O2'	2.51	0.40
22:BA:2192:U:C2'	22:BA:2193:G:H5'	2.51	0.40
22:BA:2334:U:H4'	22:BA:2335:A:OP2	2.20	0.40
22:BA:2593:U:C2	22:BA:2594:C:C6	3.09	0.40
22:BA:2659:G:P	28:BG:158:LYS:HZ1	2.45	0.40
24:BC:17:VAL:N	24:BC:204:VAL:HG22	2.35	0.40
24:BC:107:PRO:HD2	24:BC:110:LEU:HD22	2.03	0.40
24:BC:124:ILE:HD12	24:BC:136:PRO:HD2	2.03	0.40
25:BD:13:ARG:O	25:BD:14:ILE:HD12	2.20	0.40
25:BD:28:GLU:OE2	25:BD:30:GLU:CG	2.68	0.40
29:BH:91:PHE:HB3	1:CA:55:A:N3	2.36	0.40
30:BI:115:ALA:O	30:BI:116:ASP:HB2	2.20	0.40
36:BO:26:LEU:HD11	36:BO:78:VAL:HG21	2.02	0.40
41:BT:88:LYS:O	41:BT:89:GLU:CB	2.67	0.40
47:BZ:13:ALA:O	47:BZ:21:LYS:HE2	2.21	0.40
1:CA:152:A:C6	1:CA:170:U:C2	3.10	0.40
1:CA:174:A:C4	1:CA:175:C:C6	3.09	0.40
1:CA:355:C:C4	1:CA:356:A:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:437:U:O2'	1:CA:438:U:H5'	2.21	0.40
1:CA:474:G:C2	1:CA:475:C:C2	3.09	0.40
1:CA:560:A:N7	1:CA:566:G:C4	2.89	0.40
1:CA:716:A:C2	1:CA:717:U:C2	3.09	0.40
1:CA:773:G:C4	1:CA:807:A:N1	2.89	0.40
2:CB:67:ILE:HD13	2:CB:160:ALA:HB3	2.03	0.40
2:CB:96:TRP:CE3	2:CB:97:LEU:O	2.73	0.40
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.21	0.40
3:CC:5:VAL:HG21	3:CC:10:ILE:HD13	2.03	0.40
3:CC:16:LYS:HA	3:CC:16:LYS:HE3	2.02	0.40
3:CC:92:ALA:O	3:CC:96:GLY:N	2.52	0.40
4:CD:31:LYS:O	4:CD:32:CYS:CB	2.69	0.40
5:CE:68:ARG:C	5:CE:69:ARG:O	2.60	0.40
7:CG:33:ASP:HB3	7:CG:35:LYS:HE3	2.03	0.40
11:CK:82:LEU:CD2	11:CK:82:LEU:N	2.84	0.40
12:CL:94:ARG:HG2	12:CL:94:ARG:H	1.79	0.40
14:CN:23:LYS:HG3	14:CN:24:ARG:N	2.36	0.40
15:CO:15:PHE:CE2	15:CO:85:LEU:HD11	2.56	0.40
15:CO:45:GLU:O	15:CO:46:HIS:HB2	2.21	0.40
17:CQ:17:MET:CE	17:CQ:20:SER:O	2.68	0.40
18:CR:49:ALA:O	18:CR:50:LYS:C	2.65	0.40
18:CR:51:TYR:O	18:CR:52:GLN:C	2.64	0.40
20:CT:64:LYS:HA	20:CT:64:LYS:HE3	2.03	0.40
22:DA:172:A:H2'	22:DA:173:A:C8	2.56	0.40
22:DA:189:G:C5	22:DA:205:G:N2	2.89	0.40
22:DA:242:G:N7	51:D3:5:LYS:HG2	2.35	0.40
22:DA:514:A:C2	22:DA:515:A:N3	2.89	0.40
22:DA:558:U:H2'	22:DA:559:G:C8	2.56	0.40
22:DA:1020:A:C2	22:DA:1141:U:O2	2.74	0.40
22:DA:1356:G:C2	22:DA:1357:C:H1'	2.57	0.40
22:DA:1394:U:H2'	22:DA:1395:A:O4'	2.21	0.40
22:DA:1567:G:N7	24:DC:83:TYR:CE1	2.89	0.40
22:DA:1603:A:P	22:DA:1604:C:OP2	2.79	0.40
22:DA:1914:C:H3'	22:DA:1915:U:C6	2.57	0.40
22:DA:1922:G:H2'	22:DA:1923:U:O4'	2.21	0.40
22:DA:2053:G:N2	22:DA:2054:A:H1'	2.36	0.40
22:DA:2093:G:C5'	29:DH:24:GLY:HA3	2.50	0.40
22:DA:2370:G:H4'	49:D1:44:ARG:NH1	2.35	0.40
22:DA:2533:U:H2'	22:DA:2534:A:O4'	2.21	0.40
22:DA:2547:A:C2	22:DA:2562:U:C2	3.09	0.40
22:DA:2612:C:H5"	22:DA:2613:U:P	2.61	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2636:C:H4'	25:DD:81:GLU:OE1	2.21	0.40
22:DA:2892:G:H5"	22:DA:2894:G:N2	2.35	0.40
24:DC:109:GLY:O	24:DC:111:LYS:HE3	2.22	0.40
31:DJ:58:ASN:HA	31:DJ:126:ALA:O	2.20	0.40
33:DL:29:LYS:C	33:DL:30:THR:HG23	2.46	0.40
33:DL:77:ILE:HD13	33:DL:108:ALA:HB1	2.03	0.40
34:DM:35:ALA:HB2	34:DM:102:LEU:HD11	2.02	0.40
35:DN:90:ARG:HG2	35:DN:92:GLY:O	2.22	0.40
40:DS:75:PHE:CZ	40:DS:104:THR:HG21	2.57	0.40
41:DT:49:LYS:HD3	41:DT:49:LYS:N	2.36	0.40
42:DU:13:VAL:CG1	42:DU:18:ASP:O	2.69	0.40
45:DX:42:SER:OG	45:DX:43:GLU:N	2.54	0.40
1:AA:198:G:C2	1:AA:199:A:C8	3.09	0.40
1:AA:257:G:O2'	1:AA:258:G:H5'	2.22	0.40
1:AA:389:A:H2'	1:AA:389:A:N3	2.36	0.40
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.21	0.40
1:AA:1346:A:C5	7:AG:10:ARG:NH2	2.89	0.40
2:AB:17:GLY:HA2	2:AB:41:ILE:HG23	2.03	0.40
2:AB:108:ARG:O	2:AB:111:ILE:HB	2.22	0.40
3:AC:39:VAL:HG23	3:AC:40:ARG:N	2.35	0.40
3:AC:113:ALA:O	3:AC:116:VAL:HB	2.20	0.40
4:AD:100:ASN:C	4:AD:102:VAL:H	2.29	0.40
5:AE:23:LYS:O	5:AE:24:THR:HB	2.20	0.40
6:AF:42:TRP:CZ2	6:AF:61:LEU:HD22	2.57	0.40
6:AF:54:LEU:C	6:AF:54:LEU:HD22	2.46	0.40
6:AF:64:VAL:CG1	6:AF:65:GLU:N	2.83	0.40
10:AJ:49:PHE:CE2	14:AN:77:PHE:CZ	3.09	0.40
11:AK:89:PRO:HA	21:AU:25:LYS:HE2	2.03	0.40
14:AN:79:LEU:HB2	14:AN:84:VAL:HG23	2.02	0.40
16:AP:3:THR:CG2	16:AP:4:ILE:N	2.85	0.40
19:AS:18:LYS:O	19:AS:31:LEU:HD21	2.22	0.40
22:BA:102:U:C4	46:BY:2:LYS:HD2	2.56	0.40
22:BA:571:U:O4	22:BA:575:A:C4	2.74	0.40
22:BA:927:A:H2'	22:BA:928:A:O4'	2.21	0.40
22:BA:978:G:C2'	22:BA:979:A:H5'	2.51	0.40
22:BA:1064:C:N4	22:BA:1070:A:OP2	2.54	0.40
22:BA:1100:C:H2'	22:BA:1101:U:C5	2.56	0.40
22:BA:1356:G:C2	22:BA:1357:C:N1	2.89	0.40
22:BA:1889:A:H1'	22:BA:2086:U:O2'	2.21	0.40
22:BA:2016:U:C4	22:BA:2017:U:C4	3.10	0.40
22:BA:2020:A:H5'	48:B0:9:THR:HG22	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2793:C:H2'	22:BA:2794:C:C6	2.56	0.40
27:BF:111:ILE:O	27:BF:114:PHE:HB2	2.21	0.40
29:BH:90:LEU:HB2	29:BH:124:THR:C	2.46	0.40
30:BI:22:PRO:HB2	30:BI:23:PRO:HD3	2.03	0.40
32:BK:6:THR:CG2	32:BK:7:MET:N	2.85	0.40
51:B3:45:ARG:N	51:B3:46:PRO:HD2	2.36	0.40
51:B3:61:CYS:O	51:B3:62:LEU:HD23	2.21	0.40
53:B5:35:THR:O	53:B5:35:THR:OG1	2.32	0.40
1:CA:440:C:C2'	1:CA:441:A:O5'	2.70	0.40
1:CA:502:A:OP1	12:CL:115:SER:HB2	2.20	0.40
1:CA:505:G:H4'	1:CA:534:U:N3	2.37	0.40
1:CA:552:U:N3	1:CA:553:A:C8	2.89	0.40
1:CA:600:A:C2	1:CA:639:G:N3	2.88	0.40
1:CA:781:A:H2'	1:CA:782:A:H5'	2.03	0.40
1:CA:942:G:C2	1:CA:1342:C:C2	3.09	0.40
1:CA:1061:G:C5	1:CA:1062:U:C5	3.10	0.40
1:CA:1087:G:C2'	1:CA:1088:G:H5'	2.51	0.40
2:CB:35:ARG:O	2:CB:37:LYS:N	2.54	0.40
4:CD:202:GLU:CD	5:CE:105:ILE:HG22	2.45	0.40
13:CM:74:SER:O	13:CM:78:LYS:HG3	2.20	0.40
15:CO:78:TYR:CD1	15:CO:78:TYR:C	2.98	0.40
16:CP:38:PHE:CE2	16:CP:51:ARG:HD2	2.56	0.40
22:DA:187:G:O2'	22:DA:1365:A:C2	2.66	0.40
22:DA:192:C:H2'	22:DA:193:U:H5'	2.02	0.40
22:DA:517:C:H1'	40:DS:78:GLU:OE2	2.22	0.40
22:DA:563:A:C6	22:DA:2018:G:C4	3.09	0.40
22:DA:570:G:C5	22:DA:2030:A:C5	3.10	0.40
22:DA:580:U:O2'	22:DA:581:C:H5'	2.20	0.40
22:DA:635:C:O2'	22:DA:639:U:OP1	2.39	0.40
22:DA:681:G:N3	22:DA:682:G:C8	2.89	0.40
22:DA:796:C:H2'	22:DA:797:G:C8	2.56	0.40
22:DA:813:U:N3	22:DA:814:C:C4	2.89	0.40
22:DA:820:A:H2'	22:DA:821:A:O4'	2.21	0.40
22:DA:1370:C:O4'	22:DA:1810:A:H2	2.04	0.40
22:DA:1792:G:O2'	22:DA:1793:C:H5'	2.21	0.40
22:DA:1824:G:OP1	24:DC:53:HIS:CE1	2.74	0.40
22:DA:1914:C:O2	22:DA:1914:C:O4'	2.39	0.40
22:DA:2105:U:C5	22:DA:2106:U:C4	3.09	0.40
22:DA:2235:G:C4	22:DA:2236:U:C6	3.09	0.40
22:DA:2539:C:H4'	52:D4:3:VAL:HG11	2.03	0.40
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2641:G:H5”	31:DJ:78:THR:HB	2.03	0.40
22:DA:2650:U:C2	22:DA:2671:G:N2	2.89	0.40
22:DA:2834:G:H2’	22:DA:2879:A:H61	1.85	0.40
24:DC:230:HIS:O	24:DC:231:PRO:C	2.63	0.40
26:DE:170:ARG:CZ	26:DE:176:ASP:OD1	2.69	0.40
28:DG:22:GLN:OE1	28:DG:37:LEU:CB	2.69	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
31:DJ:3:THR:HG22	31:DJ:4:PHE:N	2.36	0.40
31:DJ:38:GLY:C	31:DJ:40:HIS:N	2.79	0.40
32:DK:58:LEU:HD11	32:DK:86:LEU:HB3	2.02	0.40
35:DN:87:PHE:O	35:DN:88:ALA:C	2.63	0.40
36:DO:2:ASP:O	36:DO:6:ALA:CB	2.69	0.40
40:DS:59:GLU:CD	40:DS:66:ILE:HD11	2.46	0.40
40:DS:66:ILE:C	40:DS:68:ASP:N	2.78	0.40
42:DU:13:VAL:CG2	42:DU:39:ILE:HG21	2.50	0.40
42:DU:25:VAL:HG22	42:DU:36:VAL:HG22	2.03	0.40
42:DU:74:ASN:ND2	42:DU:77:THR:HG23	2.36	0.40
46:DY:31:GLN:HG2	46:DY:36:GLN:HB2	2.03	0.40
52:D4:1:MET:HB3	52:D4:34:LYS:HE3	2.03	0.40
1:AA:5:U:C2	1:AA:5:U:OP1	2.74	0.40
1:AA:73:C:O2’	1:AA:74:A:C5’	2.69	0.40
1:AA:198:G:C5	1:AA:199:A:N7	2.89	0.40
1:AA:374:A:N1	1:AA:390:U:O2’	2.53	0.40
1:AA:719:C:H1’	18:AR:38:LYS:HG2	2.02	0.40
1:AA:807:A:C5	1:AA:808:C:C5	3.09	0.40
1:AA:965:U:O4’	1:AA:969:A:N9	2.54	0.40
1:AA:1001:C:H2’	1:AA:1002:G:C8	2.56	0.40
1:AA:1048:G:C4	1:AA:1050:G:N7	2.89	0.40
1:AA:1296:C:H4’	1:AA:1302:C:C4	2.56	0.40
1:AA:1527:U:C4	1:AA:1528:U:O4	2.74	0.40
2:AB:139:ARG:HG3	2:AB:140:GLU:N	2.36	0.40
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.20	0.40
4:AD:101:VAL:O	4:AD:101:VAL:CG1	2.68	0.40
5:AE:94:VAL:HG21	5:AE:111:MET:HE1	2.03	0.40
6:AF:29:ILE:HG21	6:AF:64:VAL:CG1	2.51	0.40
10:AJ:66:GLU:CG	14:AN:99:ALA:HB2	2.51	0.40
12:AL:43:LYS:CG	12:AL:44:LYS:HD3	2.52	0.40
13:AM:7:ILE:HD12	13:AM:8:ASN:N	2.37	0.40
13:AM:111:GLY:O	13:AM:112:PRO:O	2.38	0.40
20:AT:43:ASP:OD1	20:AT:43:ASP:C	2.63	0.40
22:BA:247:G:C8	22:BA:249:C:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:646:U:H3'	22:BA:647:G:C5'	2.52	0.40
22:BA:846:U:O2'	22:BA:847:U:OP2	2.38	0.40
22:BA:1050:A:C2	22:BA:2751:G:C4	3.09	0.40
22:BA:1062:G:N2	22:BA:1077:A:C2	2.89	0.40
22:BA:1087:G:C2'	22:BA:1089:A:H1'	2.51	0.40
22:BA:1144:A:C6	22:BA:1145:C:C4	3.09	0.40
22:BA:1400:U:O2'	22:BA:1401:G:H5'	2.20	0.40
22:BA:2592:G:C5	22:BA:2593:U:C5	3.10	0.40
55:BA:3001:VIR:H28	55:BA:3001:VIR:H313	1.73	0.40
57:BA:3254:HOH:O	31:BJ:111:LYS:HE2	2.21	0.40
28:BG:139:GLN:O	28:BG:139:GLN:HG2	2.20	0.40
32:BK:28:SER:C	32:BK:30:ARG:H	2.29	0.40
35:BN:51:LEU:O	35:BN:52:ILE:C	2.63	0.40
42:BU:12:ILE:HG13	42:BU:22:ARG:HG3	2.03	0.40
44:BW:51:VAL:HG21	44:BW:80:ILE:O	2.22	0.40
44:BW:66:LYS:HD2	44:BW:85:GLU:HB3	2.03	0.40
51:B3:31:HIS:CD2	51:B3:32:ILE:HG13	2.57	0.40
1:CA:39:G:N3	1:CA:40:C:C6	2.89	0.40
1:CA:147:G:H2'	1:CA:148:G:C8	2.55	0.40
1:CA:216:U:H4'	1:CA:464:U:H4'	2.03	0.40
1:CA:216:U:C5'	1:CA:464:U:H4'	2.51	0.40
1:CA:330:C:O2	1:CA:330:C:C2'	2.70	0.40
1:CA:575:G:C5	1:CA:821:G:C8	3.09	0.40
1:CA:1158:C:N3	1:CA:1160:G:N7	2.69	0.40
1:CA:1328:C:OP1	13:CM:28:THR:HG21	2.22	0.40
3:CC:103:ILE:N	3:CC:103:ILE:HD12	2.36	0.40
4:CD:105:MET:SD	4:CD:143:VAL:CG1	3.09	0.40
4:CD:105:MET:HE1	4:CD:143:VAL:HG12	2.03	0.40
4:CD:145:ILE:N	4:CD:145:ILE:HD12	2.37	0.40
5:CE:104:GLY:O	5:CE:105:ILE:HB	2.21	0.40
6:CF:18:VAL:HG12	6:CF:19:PRO:CD	2.52	0.40
7:CG:103:TRP:O	7:CG:134:ALA:HB2	2.21	0.40
8:CH:16:ASN:O	8:CH:17:GLY:C	2.64	0.40
9:CI:28:ILE:HG23	9:CI:63:LEU:HD11	2.03	0.40
10:CJ:7:ARG:HD2	10:CJ:73:LEU:HD21	2.04	0.40
10:CJ:89:ARG:O	10:CJ:90:LEU:HG	2.21	0.40
13:CM:45:ILE:O	13:CM:45:ILE:HG22	2.20	0.40
15:CO:37:ASN:O	15:CO:38:HIS:C	2.64	0.40
16:CP:19:VAL:CG1	16:CP:37:GLY:CA	3.00	0.40
18:CR:34:THR:CG2	18:CR:38:LYS:HB2	2.52	0.40
20:CT:30:THR:O	20:CT:34:LYS:HG2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:19:A:C2	22:DA:522:A:C2	3.09	0.40
22:DA:29:U:H5"	38:DQ:7:GLY:HA3	2.02	0.40
22:DA:61:C:H5'	46:DY:43:LEU:HD12	2.03	0.40
22:DA:105:C:H2'	22:DA:106:C:H6	1.87	0.40
22:DA:201:C:C5	22:DA:202:U:C5	3.09	0.40
22:DA:228:C:N3	22:DA:418:C:O4'	2.54	0.40
22:DA:449:A:C5	22:DA:450:G:N7	2.89	0.40
22:DA:455:C:N4	22:DA:473:G:OP2	2.50	0.40
22:DA:647:G:N7	22:DA:648:G:N7	2.70	0.40
22:DA:690:G:O4'	22:DA:780:G:H5'	2.20	0.40
22:DA:812:C:H1'	22:DA:1250:G:C2	2.56	0.40
22:DA:874:G:C2	22:DA:904:G:C2	3.10	0.40
22:DA:938:G:C2	22:DA:939:G:C8	3.09	0.40
22:DA:1068:G:N2	22:DA:1069:A:O4'	2.54	0.40
22:DA:1154:G:P	38:DQ:58:ARG:HH11	2.44	0.40
22:DA:1184:U:OP1	47:DZ:30:ARG:NH2	2.54	0.40
22:DA:1214:A:H4'	22:DA:1239:G:H4'	2.03	0.40
22:DA:1806:C:C4	22:DA:1807:G:C5	3.10	0.40
22:DA:1953:A:H1'	22:DA:2560:A:C1'	2.52	0.40
22:DA:2054:A:C2	22:DA:2616:C:C2	3.09	0.40
22:DA:2093:G:O5'	29:DH:24:GLY:N	2.52	0.40
22:DA:2201:G:N3	22:DA:2202:U:C6	2.89	0.40
22:DA:2204:G:C5	22:DA:2221:G:N2	2.90	0.40
22:DA:2309:A:C6	22:DA:2310:C:N3	2.89	0.40
22:DA:2330:G:C2	22:DA:2386:A:C2	3.09	0.40
22:DA:2345:G:H4'	22:DA:2346:A:C5'	2.51	0.40
22:DA:2625:G:H2'	22:DA:2626:C:O4'	2.21	0.40
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.21	0.40
22:DA:2728:U:O2'	22:DA:2729:G:H5"	2.21	0.40
22:DA:2880:C:O2	35:DN:93:GLY:HA3	2.22	0.40
23:DB:55:U:H4'	27:DF:25:VAL:HG12	2.03	0.40
25:DD:36:GLN:HA	25:DD:92:VAL:HG22	2.03	0.40
27:DF:38:MET:CG	27:DF:152:LEU:HB3	2.51	0.40
28:DG:141:ILE:HG13	28:DG:142:GLY:N	2.36	0.40
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	2.04	0.40
36:DO:7:ARG:NH1	36:DO:97:PHE:CE2	2.89	0.40
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.36	0.40
37:DP:103:ARG:HG2	37:DP:107:ALA:HB1	2.03	0.40
39:DR:32:THR:HG22	39:DR:33:VAL:N	2.37	0.40
40:DS:24:ILE:CG2	40:DS:32:ALA:HB1	2.51	0.40
41:DT:32:LEU:O	41:DT:32:LEU:HD12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:67:VAL:HA	42:DU:70:VAL:HG22	2.03	0.40
48:D0:17:ARG:HA	48:D0:20:ASP:OD2	2.21	0.40
1:AA:39:G:H2'	1:AA:40:C:H6	1.86	0.40
1:AA:184:G:N2	1:AA:194:C:C4	2.90	0.40
1:AA:882:C:O2'	1:AA:883:C:H5'	2.22	0.40
1:AA:945:G:C2	1:AA:946:A:C8	3.09	0.40
1:AA:1106:G:N1	1:AA:1107:C:C4	2.90	0.40
1:AA:1118:U:H5"	9:AI:106:ARG:HG3	2.03	0.40
1:AA:1126:U:O2	1:AA:1280:A:H5"	2.20	0.40
1:AA:1190:G:P	3:AC:5:VAL:HB	2.61	0.40
1:AA:1381:U:C4	1:AA:1382:C:C4	3.10	0.40
1:AA:1438:G:C4	1:AA:1439:G:C8	3.09	0.40
2:AB:58:ASN:C	2:AB:60:ILE:N	2.80	0.40
6:AF:38:ARG:HD2	6:AF:40:GLU:OE2	2.21	0.40
7:AG:63:GLU:O	7:AG:67:GLU:N	2.53	0.40
8:AH:115:ALA:O	8:AH:118:GLN:N	2.55	0.40
9:AI:130:ARG:HB3	9:AI:130:ARG:NH1	2.36	0.40
10:AJ:66:GLU:O	14:AN:96:LEU:HD12	2.21	0.40
14:AN:43:ASN:HA	14:AN:45:VAL:HG22	2.03	0.40
17:AQ:5:ILE:N	17:AQ:5:ILE:HD12	2.37	0.40
21:AU:17:ARG:HH11	21:AU:20:LYS:HG2	1.86	0.40
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.50	0.40
22:BA:54:G:H2'	22:BA:55:G:O5'	2.21	0.40
22:BA:141:G:H3'	22:BA:142:A:C8	2.56	0.40
22:BA:248:G:O5'	22:BA:249:C:H5"	2.22	0.40
22:BA:259:G:O2'	22:BA:260:G:H5'	2.21	0.40
22:BA:499:U:O4	22:BA:500:G:C6	2.75	0.40
22:BA:1243:C:H2'	22:BA:1244:A:O4'	2.20	0.40
22:BA:1274:A:N1	22:BA:1644:C:O2'	2.49	0.40
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	2.03	0.40
22:BA:1854:A:H2'	22:BA:1855:U:H5'	2.02	0.40
22:BA:2001:C:H4'	22:BA:2689:U:H2'	2.03	0.40
22:BA:2069:G:C2	22:BA:2443:C:C2	3.09	0.40
22:BA:2211:A:O2'	22:BA:2212:A:P	2.79	0.40
22:BA:2681:C:C4	22:BA:2724:U:C5	3.10	0.40
23:BB:39:A:C2	23:BB:44:G:C4	3.09	0.40
26:BE:65:THR:C	26:BE:67:ARG:H	2.29	0.40
28:BG:52:PHE:CD1	28:BG:52:PHE:N	2.89	0.40
30:BI:54:PRO:HB2	30:BI:78:VAL:HG11	2.03	0.40
33:BL:63:LYS:HA	51:B3:13:ARG:HG3	2.02	0.40
35:BN:52:ILE:HG21	35:BN:94:TYR:CG	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:41:LYS:HA	38:BQ:44:GLN:HB2	2.03	0.40
41:BT:1:MET:O	41:BT:2:ILE:HG13	2.22	0.40
41:BT:44:LYS:O	41:BT:48:GLN:HG3	2.21	0.40
41:BT:50:LEU:N	41:BT:50:LEU:CD1	2.84	0.40
48:B0:12:LYS:HA	48:B0:12:LYS:HD2	1.87	0.40
49:B1:34:LEU:H	49:B1:52:ALA:HB2	1.86	0.40
53:B5:179:ALA:O	53:B5:180:SER:C	2.64	0.40
1:CA:36:C:H4'	12:CL:119:VAL:O	2.21	0.40
1:CA:66:A:C5	1:CA:67:C:C5	3.09	0.40
1:CA:220:G:C2'	1:CA:221:C:H5'	2.51	0.40
1:CA:430:A:OP1	4:CD:9:LEU:HB2	2.22	0.40
1:CA:486:U:OP2	1:CA:486:U:C6	2.75	0.40
1:CA:649:A:N3	1:CA:650:G:H1'	2.37	0.40
1:CA:983:A:N3	1:CA:983:A:H2'	2.36	0.40
1:CA:1327:C:C4	1:CA:1328:C:N4	2.90	0.40
3:CC:167:TRP:C	3:CC:167:TRP:CE3	3.00	0.40
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	2.21	0.40
5:CE:46:VAL:HG22	5:CE:118:ALA:HB1	2.02	0.40
6:CF:91:ARG:C	6:CF:92:THR:OG1	2.63	0.40
10:CJ:51:VAL:HB	14:CN:81:ARG:HB2	2.03	0.40
12:CL:33:VAL:O	12:CL:34:CYS:CB	2.70	0.40
14:CN:53:ARG:C	14:CN:55:SER:N	2.80	0.40
22:DA:187:G:O2'	22:DA:1365:A:N3	2.35	0.40
22:DA:197:A:N3	22:DA:197:A:H2'	2.36	0.40
22:DA:301:G:N2	22:DA:302:C:C2	2.89	0.40
22:DA:659:G:C5	22:DA:660:C:C4	3.10	0.40
22:DA:663:G:C6	22:DA:664:G:C5	3.09	0.40
22:DA:667:U:O2	51:D3:2:PRO:HG2	2.21	0.40
22:DA:686:U:H2'	22:DA:788:A:C2	2.57	0.40
22:DA:776:G:C8	22:DA:793:A:C5	3.10	0.40
22:DA:900:A:H2'	22:DA:901:C:H5'	2.02	0.40
22:DA:915:C:C4	22:DA:916:G:C5	3.09	0.40
22:DA:1002:G:C2	22:DA:1003:G:H1'	2.56	0.40
22:DA:1206:G:C4	22:DA:1207:C:C6	3.10	0.40
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.21	0.40
22:DA:1277:G:N1	22:DA:1294:U:C2	2.89	0.40
22:DA:1293:C:H2'	22:DA:1294:U:O4'	2.22	0.40
22:DA:1351:C:C2'	22:DA:1352:U:O4'	2.68	0.40
22:DA:1464:G:C5	22:DA:1465:G:N7	2.90	0.40
22:DA:1645:G:H5"	22:DA:1646:C:O4'	2.20	0.40
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2043:C:H1'	22:DA:2779:U:O4	2.21	0.40
22:DA:2119:A:C2	22:DA:2170:A:C5	3.09	0.40
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.57	0.40
22:DA:2215:C:C2	22:DA:2216:G:C8	3.09	0.40
22:DA:2355:G:O2'	44:DW:39:ARG:HD2	2.21	0.40
22:DA:2577:A:H2	48:D0:2:ALA:N	2.19	0.40
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.75	0.40
24:DC:29:PRO:HA	24:DC:82:GLU:OE1	2.21	0.40
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.36	0.40
25:DD:4:LEU:CD1	25:DD:100:LEU:HD23	2.52	0.40
25:DD:90:PHE:CE2	25:DD:96:ILE:CD1	3.03	0.40
26:DE:7:ASP:OD1	26:DE:7:ASP:N	2.52	0.40
28:DG:149:ARG:HA	28:DG:162:VAL:CG1	2.51	0.40
30:DI:10:LYS:CB	30:DI:56:PRO:HB2	2.52	0.40
34:DM:59:ARG:O	34:DM:59:ARG:HD3	2.21	0.40
36:DO:80:GLU:O	36:DO:84:GLU:N	2.51	0.40
38:DQ:61:TRP:CH2	38:DQ:93:LYS:HB2	2.56	0.40
41:DT:39:THR:O	41:DT:40:LYS:C	2.64	0.40
43:DV:9:ARG:HG3	43:DV:41:GLU:HB3	2.02	0.40
46:DY:35:GLY:C	46:DY:36:GLN:HG3	2.46	0.40
49:D1:25:LYS:HE2	49:D1:30:LYS:O	2.21	0.40
1:AA:125:U:H2'	1:AA:126:G:O4'	2.22	0.40
1:AA:199:A:C2	1:AA:200:G:N9	2.89	0.40
1:AA:232:G:O2'	1:AA:263:A:N1	2.55	0.40
1:AA:427:U:C4	1:AA:428:G:C6	3.09	0.40
1:AA:444:G:C4	1:AA:445:G:C8	3.09	0.40
1:AA:520:A:N1	1:AA:536:C:H1'	2.37	0.40
1:AA:745:G:C2'	1:AA:746:A:H5'	2.51	0.40
1:AA:900:A:C6	1:AA:901:A:N1	2.90	0.40
1:AA:900:A:N6	1:AA:901:A:N1	2.69	0.40
1:AA:981:U:O2'	14:AN:61:ARG:NE	2.54	0.40
1:AA:1039:G:O2'	1:AA:1040:U:H5'	2.22	0.40
1:AA:1079:G:C5'	5:AE:134:ILE:HD13	2.51	0.40
1:AA:1190:G:P	3:AC:5:VAL:H	2.44	0.40
1:AA:1248:A:C5	1:AA:1249:C:C5	3.09	0.40
1:AA:1304:G:C6	1:AA:1305:G:N2	2.89	0.40
1:AA:1315:U:O2'	1:AA:1360:A:N3	2.52	0.40
1:AA:1501:C:C6	1:AA:1504:G:C8	3.09	0.40
3:AC:3:GLN:N	3:AC:3:GLN:OE1	2.54	0.40
3:AC:73:PRO:HG3	3:AC:105:GLU:HG3	2.03	0.40
4:AD:53:VAL:CG2	4:AD:54:GLN:N	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:106:THR:HG21	8:AH:121:LEU:HD13	2.04	0.40
9:AI:51:PRO:HB3	9:AI:84:THR:HG23	2.02	0.40
11:AK:126:LYS:C	21:AU:34:ARG:HH21	2.30	0.40
14:AN:17:ALA:HA	14:AN:55:SER:O	2.22	0.40
14:AN:33:ASP:O	14:AN:35:ASN:CG	2.64	0.40
18:AR:43:ARG:HG2	18:AR:44:ILE:HD13	2.04	0.40
18:AR:68:LEU:HA	18:AR:69:PRO:HD3	1.97	0.40
19:AS:65:GLU:N	19:AS:65:GLU:CD	2.80	0.40
19:AS:67:VAL:C	19:AS:69:HIS:H	2.30	0.40
22:BA:10:A:C5	22:BA:2800:A:C6	3.09	0.40
22:BA:28:A:C4	22:BA:29:U:C6	3.09	0.40
22:BA:428:A:H2'	22:BA:429:A:C8	2.56	0.40
22:BA:615:U:C4	26:BE:35:TYR:CE2	3.09	0.40
22:BA:826:U:H2'	22:BA:828:U:O4'	2.21	0.40
22:BA:979:A:H2'	22:BA:982:C:H42	1.87	0.40
22:BA:1056:G:H5"	22:BA:1057:A:C5'	2.52	0.40
22:BA:1083:U:O2	22:BA:1085:A:C8	2.75	0.40
22:BA:1358:G:N2	22:BA:1374:G:C6	2.90	0.40
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.21	0.40
22:BA:1795:C:C5	22:BA:1796:U:C5	3.08	0.40
22:BA:2059:A:C2	22:BA:2503:A:C6	3.09	0.40
22:BA:2262:U:P	44:BW:19:LYS:HE2	2.62	0.40
22:BA:2578:G:N3	22:BA:2578:G:H2'	2.36	0.40
22:BA:2720:U:C2	22:BA:2872:A:C5	3.09	0.40
22:BA:2901:C:C4	22:BA:2902:C:C5	3.10	0.40
24:BC:11:PRO:C	24:BC:13:ARG:N	2.80	0.40
24:BC:118:SER:HA	24:BC:129:THR:O	2.22	0.40
25:BD:14:ILE:HD13	25:BD:24:VAL:HG21	2.03	0.40
29:BH:2:GLN:C	29:BH:3:VAL:HG13	2.45	0.40
29:BH:120:GLY:HA2	29:BH:122:LEU:HA	2.04	0.40
30:BI:57:VAL:HG23	30:BI:71:THR:HA	2.02	0.40
33:BL:96:LYS:HG3	33:BL:101:ILE:HD11	2.03	0.40
43:BV:82:TYR:CD1	43:BV:82:TYR:N	2.89	0.40
49:B1:34:LEU:CB	49:B1:52:ALA:HB2	2.51	0.40
1:CA:102:G:N2	1:CA:103:U:C2	2.89	0.40
1:CA:104:G:H4'	1:CA:174:A:O4'	2.20	0.40
1:CA:181:A:C5	1:CA:194:C:C5	3.10	0.40
1:CA:491:G:H2'	1:CA:492:C:H6	1.85	0.40
1:CA:1105:A:C2	1:CA:1106:G:N7	2.90	0.40
1:CA:1140:C:O2'	1:CA:1141:C:H6	2.05	0.40
1:CA:1160:G:O2'	1:CA:1161:C:OP2	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1169:A:C2	1:CA:1170:A:N3	2.90	0.40
1:CA:1490:U:H2'	1:CA:1491:G:C8	2.56	0.40
4:CD:65:TYR:O	4:CD:66:GLY:C	2.62	0.40
5:CE:26:LYS:C	5:CE:26:LYS:HD3	2.46	0.40
6:CF:43:GLY:O	6:CF:44:ARG:C	2.63	0.40
6:CF:43:GLY:HA2	6:CF:58:HIS:CD2	2.57	0.40
11:CK:85:MET:HA	11:CK:111:THR:O	2.21	0.40
12:CL:68:GLY:O	12:CL:99:ARG:NH1	2.54	0.40
12:CL:72:HIS:ND1	12:CL:72:HIS:C	2.78	0.40
12:CL:86:ARG:HD2	12:CL:88:LYS:N	2.36	0.40
14:CN:35:ASN:O	14:CN:42:TRP:CH2	2.74	0.40
15:CO:78:TYR:OH	15:CO:88:ARG:NE	2.54	0.40
18:CR:25:ASP:HB3	18:CR:28:THR:HB	2.02	0.40
19:CS:40:ILE:HD13	19:CS:66:MET:HB3	2.03	0.40
20:CT:6:SER:C	20:CT:8:LYS:H	2.29	0.40
20:CT:58:VAL:HG12	20:CT:59:ASP:N	2.36	0.40
21:CU:47:ARG:HA	21:CU:47:ARG:HE	1.87	0.40
22:DA:55:G:C2	22:DA:116:C:C2	3.09	0.40
22:DA:228:C:H5'	22:DA:229:C:C6	2.57	0.40
22:DA:534:U:H1'	38:DQ:45:TYR:HB3	2.04	0.40
22:DA:618:G:H2'	22:DA:618:G:N3	2.35	0.40
22:DA:802:A:C5	22:DA:803:U:C5	3.10	0.40
22:DA:1068:G:N3	22:DA:1096:A:C5'	2.85	0.40
22:DA:1566:A:C2	24:DC:213:TRP:CB	3.05	0.40
22:DA:1738:G:HO2'	22:DA:1739:A:P	2.45	0.40
22:DA:1835:G:C6	22:DA:1836:C:C5	3.10	0.40
22:DA:1965:C:H3'	22:DA:1966:A:C8	2.57	0.40
22:DA:2820:A:C8	25:DD:196:ALA:CB	3.04	0.40
23:DB:21:G:H2'	23:DB:22:U:O4'	2.22	0.40
23:DB:27:C:C5	23:DB:28:C:C4	3.09	0.40
25:DD:14:ILE:HG12	25:DD:24:VAL:CG2	2.52	0.40
25:DD:151:THR:HG22	25:DD:152:PRO:HD3	2.03	0.40
27:DF:83:TYR:CG	27:DF:84:PRO:HD2	2.56	0.40
27:DF:147:ASP:O	27:DF:148:ARG:CB	2.69	0.40
28:DG:158:LYS:O	28:DG:159:GLY:C	2.63	0.40
31:DJ:116:ARG:HB2	31:DJ:116:ARG:NH1	2.36	0.40
32:DK:11:ALA:O	32:DK:12:ASP:HB3	2.22	0.40
37:DP:103:ARG:HD3	37:DP:108:ALA:HB2	2.03	0.40
42:DU:24:LYS:N	42:DU:37:GLU:HG2	2.36	0.40
46:DY:31:GLN:OE1	46:DY:37:LEU:HD12	2.21	0.40
50:D2:25:LYS:O	50:D2:29:GLN:HG3	2.22	0.40

All (4) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:368:U:OP1	29:DH:93:SER:OG[4_455]	1.70	0.50
1:AA:367:U:O5'	29:DH:123:ARG:NH2[4_455]	2.02	0.18
1:AA:368:U:O4	29:DH:83:LYS:CE[4_455]	2.03	0.17
1:AA:368:U:O4	29:DH:83:LYS:CB[4_455]	2.13	0.07

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/218 (99%)	126 (58%)	40 (18%)	50 (23%)	0	0
2	CB	216/218 (99%)	133 (62%)	52 (24%)	31 (14%)	0	0
3	AC	204/206 (99%)	149 (73%)	38 (19%)	17 (8%)	0	1
3	CC	204/206 (99%)	153 (75%)	40 (20%)	11 (5%)	1	5
4	AD	203/205 (99%)	139 (68%)	33 (16%)	31 (15%)	0	0
4	CD	203/205 (99%)	150 (74%)	31 (15%)	22 (11%)	0	1
5	AE	148/150 (99%)	104 (70%)	31 (21%)	13 (9%)	0	1
5	CE	148/150 (99%)	98 (66%)	28 (19%)	22 (15%)	0	0
6	AF	98/100 (98%)	66 (67%)	19 (19%)	13 (13%)	0	0
6	CF	98/100 (98%)	66 (67%)	16 (16%)	16 (16%)	0	0
7	AG	149/151 (99%)	111 (74%)	28 (19%)	10 (7%)	1	3
7	CG	149/151 (99%)	121 (81%)	20 (13%)	8 (5%)	1	5
8	AH	127/129 (98%)	91 (72%)	21 (16%)	15 (12%)	0	1
8	CH	127/129 (98%)	95 (75%)	24 (19%)	8 (6%)	1	3
9	AI	125/127 (98%)	91 (73%)	21 (17%)	13 (10%)	0	1
9	CI	125/127 (98%)	86 (69%)	28 (22%)	11 (9%)	0	1
10	AJ	96/98 (98%)	60 (62%)	15 (16%)	21 (22%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	CJ	96/98 (98%)	71 (74%)	13 (14%)	12 (12%)	0	0
11	AK	115/117 (98%)	84 (73%)	19 (16%)	12 (10%)	0	1
11	CK	115/117 (98%)	81 (70%)	24 (21%)	10 (9%)	0	1
12	AL	121/123 (98%)	92 (76%)	22 (18%)	7 (6%)	1	4
12	CL	121/123 (98%)	94 (78%)	12 (10%)	15 (12%)	0	0
13	AM	112/114 (98%)	81 (72%)	20 (18%)	11 (10%)	0	1
13	CM	112/114 (98%)	86 (77%)	17 (15%)	9 (8%)	1	2
14	AN	92/100 (92%)	62 (67%)	18 (20%)	12 (13%)	0	0
14	CN	92/100 (92%)	59 (64%)	18 (20%)	15 (16%)	0	0
15	AO	86/88 (98%)	65 (76%)	16 (19%)	5 (6%)	1	4
15	CO	86/88 (98%)	70 (81%)	12 (14%)	4 (5%)	2	7
16	AP	80/82 (98%)	53 (66%)	15 (19%)	12 (15%)	0	0
16	CP	80/82 (98%)	59 (74%)	16 (20%)	5 (6%)	1	3
17	AQ	78/80 (98%)	54 (69%)	15 (19%)	9 (12%)	0	1
17	CQ	78/80 (98%)	56 (72%)	11 (14%)	11 (14%)	0	0
18	AR	53/55 (96%)	43 (81%)	10 (19%)	0	100	100
18	CR	53/55 (96%)	34 (64%)	13 (24%)	6 (11%)	0	1
19	AS	77/79 (98%)	54 (70%)	12 (16%)	11 (14%)	0	0
19	CS	77/79 (98%)	60 (78%)	12 (16%)	5 (6%)	1	3
20	AT	83/85 (98%)	60 (72%)	15 (18%)	8 (10%)	0	1
20	CT	83/85 (98%)	64 (77%)	12 (14%)	7 (8%)	0	1
21	AU	49/51 (96%)	27 (55%)	9 (18%)	13 (26%)	0	0
21	CU	49/51 (96%)	26 (53%)	12 (24%)	11 (22%)	0	0
24	BC	269/271 (99%)	211 (78%)	47 (18%)	11 (4%)	2	9
24	DC	269/271 (99%)	204 (76%)	50 (19%)	15 (6%)	1	4
25	BD	207/209 (99%)	180 (87%)	20 (10%)	7 (3%)	3	12
25	DD	207/209 (99%)	168 (81%)	29 (14%)	10 (5%)	2	7
26	BE	199/201 (99%)	167 (84%)	26 (13%)	6 (3%)	3	14
26	DE	199/201 (99%)	160 (80%)	28 (14%)	11 (6%)	1	4
27	BF	175/177 (99%)	144 (82%)	24 (14%)	7 (4%)	2	9
27	DF	175/177 (99%)	137 (78%)	24 (14%)	14 (8%)	1	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
28	BG	174/176 (99%)	149 (86%)	20 (12%)	5 (3%)	3 15
28	DG	174/176 (99%)	136 (78%)	29 (17%)	9 (5%)	1 5
29	BH	147/149 (99%)	89 (60%)	37 (25%)	21 (14%)	0 0
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	0 1
30	BI	139/141 (99%)	85 (61%)	36 (26%)	18 (13%)	0 0
30	DI	139/141 (99%)	82 (59%)	44 (32%)	13 (9%)	0 1
31	BJ	140/142 (99%)	129 (92%)	10 (7%)	1 (1%)	18 48
31	DJ	140/142 (99%)	118 (84%)	17 (12%)	5 (4%)	2 11
32	BK	120/122 (98%)	99 (82%)	15 (12%)	6 (5%)	1 6
32	DK	120/122 (98%)	100 (83%)	13 (11%)	7 (6%)	1 4
33	BL	141/143 (99%)	112 (79%)	22 (16%)	7 (5%)	1 6
33	DL	141/143 (99%)	99 (70%)	29 (21%)	13 (9%)	0 1
34	BM	134/136 (98%)	123 (92%)	9 (7%)	2 (2%)	8 28
34	DM	134/136 (98%)	111 (83%)	15 (11%)	8 (6%)	1 4
35	BN	118/120 (98%)	104 (88%)	10 (8%)	4 (3%)	3 12
35	DN	118/120 (98%)	94 (80%)	16 (14%)	8 (7%)	1 2
36	BO	114/116 (98%)	87 (76%)	21 (18%)	6 (5%)	1 5
36	DO	114/116 (98%)	85 (75%)	22 (19%)	7 (6%)	1 4
37	BP	112/114 (98%)	99 (88%)	9 (8%)	4 (4%)	2 11
37	DP	112/114 (98%)	84 (75%)	16 (14%)	12 (11%)	0 1
38	BQ	115/117 (98%)	109 (95%)	4 (4%)	2 (2%)	7 26
38	DQ	115/117 (98%)	101 (88%)	13 (11%)	1 (1%)	14 41
39	BR	101/103 (98%)	84 (83%)	9 (9%)	8 (8%)	1 2
39	DR	101/103 (98%)	76 (75%)	18 (18%)	7 (7%)	1 2
40	BS	108/110 (98%)	98 (91%)	7 (6%)	3 (3%)	4 15
40	DS	108/110 (98%)	88 (82%)	12 (11%)	8 (7%)	1 2
41	BT	91/93 (98%)	72 (79%)	13 (14%)	6 (7%)	1 3
41	DT	91/93 (98%)	52 (57%)	28 (31%)	11 (12%)	0 1
42	BU	100/102 (98%)	76 (76%)	16 (16%)	8 (8%)	1 2
42	DU	100/102 (98%)	71 (71%)	16 (16%)	13 (13%)	0 0
43	BV	92/94 (98%)	87 (95%)	5 (5%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
43	DV	92/94 (98%)	79 (86%)	12 (13%)	1 (1%)	11 36
44	BW	74/76 (97%)	68 (92%)	5 (7%)	1 (1%)	9 30
44	DW	73/76 (96%)	63 (86%)	8 (11%)	2 (3%)	4 16
45	BX	75/77 (97%)	68 (91%)	6 (8%)	1 (1%)	9 32
45	DX	75/77 (97%)	55 (73%)	12 (16%)	8 (11%)	0 1
46	BY	61/63 (97%)	47 (77%)	7 (12%)	7 (12%)	0 1
46	DY	61/63 (97%)	43 (70%)	13 (21%)	5 (8%)	0 2
47	BZ	56/58 (97%)	53 (95%)	3 (5%)	0	100 100
47	DZ	56/58 (97%)	47 (84%)	6 (11%)	3 (5%)	1 5
48	B0	54/56 (96%)	44 (82%)	8 (15%)	2 (4%)	2 11
48	D0	54/56 (96%)	39 (72%)	13 (24%)	2 (4%)	2 11
49	B1	48/50 (96%)	39 (81%)	5 (10%)	4 (8%)	0 1
49	D1	48/50 (96%)	37 (77%)	8 (17%)	3 (6%)	1 3
50	B2	44/46 (96%)	40 (91%)	3 (7%)	1 (2%)	5 19
50	D2	44/46 (96%)	33 (75%)	8 (18%)	3 (7%)	1 2
51	B3	62/64 (97%)	55 (89%)	6 (10%)	1 (2%)	7 27
51	D3	62/64 (97%)	46 (74%)	13 (21%)	3 (5%)	2 7
52	B4	36/38 (95%)	33 (92%)	3 (8%)	0	100 100
52	D4	36/38 (95%)	33 (92%)	2 (6%)	1 (3%)	4 15
53	B5	183/228 (80%)	97 (53%)	57 (31%)	29 (16%)	0 0
All	All	11418/11672 (98%)	8663 (76%)	1837 (16%)	918 (8%)	1 2

All (918) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	16	PHE
2	AB	21	ARG
2	AB	22	TYR
2	AB	34	ALA
2	AB	64	LYS
2	AB	73	LYS
2	AB	74	ARG
2	AB	75	ALA
2	AB	76	ALA
2	AB	107	VAL

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Mol	Chain	Res	Type
2	AB	116	ASP
2	AB	120	GLN
2	AB	129	LEU
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	155	GLY
2	AB	201	PRO
2	AB	210	VAL
2	AB	211	THR
2	AB	220	THR
3	AC	15	VAL
3	AC	18	TRP
3	AC	26	THR
3	AC	61	ALA
3	AC	101	ILE
3	AC	127	ARG
3	AC	140	ASN
3	AC	141	ALA
4	AD	23	SER
4	AD	24	GLY
4	AD	29	ASP
4	AD	33	LYS
4	AD	35	GLU
4	AD	125	VAL
4	AD	154	ARG
4	AD	160	GLU
4	AD	168	PRO
4	AD	174	ASP
4	AD	175	ALA
4	AD	191	LEU
4	AD	192	SER
5	AE	12	GLN
5	AE	100	SER
5	AE	158	GLY
6	AF	56	LYS
6	AF	91	ARG
6	AF	92	THR
6	AF	98	GLU
6	AF	99	ALA
7	AG	5	ARG
7	AG	15	ASP

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Mol	Chain	Res	Type
7	AG	56	LYS
7	AG	81	GLY
7	AG	85	TYR
7	AG	130	ASN
8	AH	3	MET
8	AH	4	GLN
8	AH	67	GLN
9	AI	41	ARG
9	AI	44	ALA
9	AI	91	ASP
10	AJ	32	THR
10	AJ	34	ALA
10	AJ	36	VAL
10	AJ	57	VAL
10	AJ	61	ALA
10	AJ	101	SER
11	AK	39	GLY
11	AK	41	ALA
11	AK	52	PHE
11	AK	72	ASP
11	AK	73	ALA
11	AK	103	ALA
12	AL	24	LEU
12	AL	26	ALA
12	AL	44	LYS
12	AL	123	LYS
13	AM	4	ILE
13	AM	7	ILE
13	AM	12	HIS
13	AM	112	PRO
14	AN	28	LYS
14	AN	34	VAL
14	AN	45	VAL
14	AN	47	LYS
14	AN	52	PRO
14	AN	53	ARG
14	AN	62	ASN
14	AN	92	GLU
15	AO	20	ASN
15	AO	73	LYS
16	AP	11	ALA
16	AP	46	LYS

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Mol	Chain	Res	Type
16	AP	48	GLU
16	AP	53	ASP
17	AQ	18	GLU
17	AQ	51	ASN
17	AQ	68	SER
19	AS	4	SER
19	AS	5	LEU
19	AS	29	LYS
19	AS	30	PRO
19	AS	65	GLU
20	AT	4	ILE
20	AT	6	SER
20	AT	70	ASN
21	AU	10	GLU
21	AU	24	GLU
21	AU	35	ARG
21	AU	36	GLU
21	AU	37	PHE
21	AU	40	LYS
24	BC	38	SER
24	BC	71	LYS
24	BC	124	ILE
24	BC	236	GLU
25	BD	105	LYS
25	BD	152	PRO
26	BE	86	ALA
27	BF	3	LYS
27	BF	41	GLY
27	BF	176	PRO
28	BG	119	ALA
29	BH	10	ALA
29	BH	34	GLY
29	BH	53	GLU
29	BH	87	GLU
29	BH	90	LEU
29	BH	118	PRO
29	BH	121	VAL
29	BH	140	ALA
30	BI	19	ASN
30	BI	45	LYS
30	BI	63	ALA
30	BI	75	PRO

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Mol	Chain	Res	Type
30	BI	83	ALA
30	BI	113	LYS
30	BI	117	MET
33	BL	69	ARG
33	BL	94	THR
33	BL	115	GLU
34	BM	69	PRO
35	BN	10	LEU
35	BN	118	ARG
35	BN	119	SER
36	BO	88	LYS
37	BP	94	LYS
37	BP	114	LEU
38	BQ	25	TYR
39	BR	31	GLU
39	BR	49	ILE
39	BR	51	VAL
39	BR	53	PHE
39	BR	55	ASP
39	BR	57	GLY
41	BT	89	GLU
42	BU	40	ASN
45	BX	3	ARG
46	BY	22	LEU
46	BY	23	ARG
50	B2	44	VAL
53	B5	62	THR
53	B5	126	SER
53	B5	134	PRO
53	B5	154	ILE
53	B5	174	ALA
53	B5	175	PRO
53	B5	181	PHE
53	B5	183	PRO
53	B5	205	ALA
53	B5	214	TYR
53	B5	221	PRO
2	CB	16	PHE
2	CB	124	GLY
2	CB	193	PRO
2	CB	194	ASP
2	CB	203	ASN

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Mol	Chain	Res	Type
2	CB	207	ILE
2	CB	220	THR
3	CC	146	ALA
3	CC	156	ARG
3	CC	192	THR
4	CD	29	ASP
4	CD	153	SER
5	CE	45	ARG
5	CE	98	PRO
5	CE	100	SER
5	CE	103	THR
5	CE	105	ILE
5	CE	123	VAL
5	CE	138	ARG
6	CF	55	HIS
6	CF	56	LYS
6	CF	86	ARG
6	CF	92	THR
6	CF	93	LYS
6	CF	98	GLU
7	CG	9	GLN
7	CG	56	LYS
7	CG	130	ASN
9	CI	26	GLY
9	CI	41	ARG
9	CI	103	PHE
9	CI	120	LYS
10	CJ	35	GLN
10	CJ	38	GLY
10	CJ	89	ARG
10	CJ	92	LEU
11	CK	52	PHE
11	CK	127	ARG
12	CL	23	ALA
12	CL	24	LEU
12	CL	26	ALA
12	CL	44	LYS
12	CL	76	GLU
12	CL	77	HIS
12	CL	89	ASP
12	CL	93	VAL
12	CL	117	TYR

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Mol	Chain	Res	Type
13	CM	11	ASP
13	CM	41	GLU
14	CN	29	ALA
14	CN	34	VAL
14	CN	52	PRO
14	CN	92	GLU
15	CO	73	LYS
16	CP	24	SER
17	CQ	13	VAL
17	CQ	51	ASN
17	CQ	52	GLU
18	CR	26	ILE
18	CR	47	THR
18	CR	71	THR
19	CS	5	LEU
19	CS	32	ARG
20	CT	4	ILE
20	CT	6	SER
21	CU	9	ASN
21	CU	12	PHE
21	CU	24	GLU
21	CU	36	GLU
21	CU	40	LYS
21	CU	53	VAL
24	DC	10	SER
24	DC	35	GLU
24	DC	58	HIS
24	DC	71	LYS
24	DC	122	ALA
24	DC	239	ASN
25	DD	31	ALA
25	DD	105	LYS
25	DD	151	THR
25	DD	152	PRO
25	DD	174	SER
26	DE	83	VAL
26	DE	153	LEU
27	DF	9	LYS
27	DF	21	ASN
27	DF	31	VAL
27	DF	123	ASP
28	DG	20	ASN

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Mol	Chain	Res	Type
28	DG	119	ALA
28	DG	175	LYS
29	DH	3	VAL
29	DH	10	ALA
29	DH	33	GLN
29	DH	35	LYS
29	DH	41	LYS
29	DH	53	GLU
29	DH	54	LEU
29	DH	83	LYS
29	DH	109	GLU
30	DI	7	ALA
30	DI	101	ILE
30	DI	102	SER
30	DI	106	LEU
30	DI	115	ALA
31	DJ	25	LEU
31	DJ	42	ALA
31	DJ	81	ILE
31	DJ	95	ARG
32	DK	35	VAL
32	DK	92	GLU
32	DK	108	ARG
33	DL	115	GLU
34	DM	69	PRO
35	DN	2	ARG
35	DN	70	THR
35	DN	88	ALA
35	DN	104	ALA
35	DN	118	ARG
36	DO	34	HIS
36	DO	116	GLN
37	DP	36	SER
37	DP	66	ASN
39	DR	102	SER
40	DS	29	VAL
40	DS	62	ASP
40	DS	67	ASP
41	DT	18	GLU
41	DT	21	SER
41	DT	22	THR
41	DT	28	ASN

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Mol	Chain	Res	Type
41	DT	39	THR
41	DT	40	LYS
41	DT	77	ARG
42	DU	9	ASP
42	DU	41	LEU
42	DU	55	PRO
42	DU	89	ASP
44	DW	20	ARG
45	DX	32	ASN
45	DX	62	LYS
47	DZ	14	ILE
49	D1	16	GLY
50	D2	44	VAL
52	D4	20	ASP
2	AB	12	ALA
2	AB	68	LEU
2	AB	83	ALA
2	AB	117	LEU
2	AB	124	GLY
2	AB	126	PHE
2	AB	128	LYS
2	AB	150	GLY
2	AB	194	ASP
2	AB	207	ILE
2	AB	212	LEU
3	AC	17	PRO
3	AC	139	GLN
4	AD	17	THR
4	AD	25	VAL
4	AD	34	ILE
4	AD	99	ASP
4	AD	151	LYS
4	AD	153	SER
4	AD	169	THR
5	AE	51	GLY
5	AE	78	ASN
5	AE	101	GLU
5	AE	109	GLY
5	AE	110	ALA
5	AE	138	ARG
5	AE	151	GLU
6	AF	7	VAL

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Mol	Chain	Res	Type
6	AF	68	GLN
6	AF	69	GLU
6	AF	95	ALA
8	AH	11	LEU
8	AH	31	LYS
8	AH	96	MET
9	AI	13	LYS
9	AI	57	MET
9	AI	59	GLU
9	AI	116	VAL
10	AJ	17	LEU
10	AJ	74	VAL
10	AJ	92	LEU
11	AK	14	LYS
12	AL	25	GLU
12	AL	89	ASP
13	AM	11	ASP
13	AM	47	GLU
14	AN	48	LEU
16	AP	68	SER
16	AP	80	LYS
17	AQ	13	VAL
17	AQ	69	LYS
17	AQ	70	THR
19	AS	35	SER
20	AT	68	HIS
21	AU	12	PHE
21	AU	26	ALA
21	AU	27	GLY
21	AU	38	TYR
24	BC	122	ALA
24	BC	238	ARG
24	BC	261	LYS
26	BE	8	ALA
26	BE	62	GLN
26	BE	66	GLY
28	BG	39	ASP
28	BG	152	ARG
28	BG	175	LYS
29	BH	3	VAL
29	BH	11	ASN
29	BH	14	SER

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Mol	Chain	Res	Type
29	BH	15	LEU
29	BH	66	ASN
29	BH	119	ASN
30	BI	4	LYS
30	BI	58	VAL
30	BI	60	THR
30	BI	65	ARG
30	BI	134	ARG
32	BK	35	VAL
32	BK	91	SER
32	BK	108	ARG
33	BL	88	GLY
36	BO	60	GLU
36	BO	99	TYR
37	BP	35	GLY
37	BP	105	GLY
38	BQ	7	GLY
40	BS	64	ALA
40	BS	66	ILE
41	BT	71	GLY
42	BU	9	ASP
42	BU	52	LEU
44	BW	54	GLY
46	BY	24	GLU
46	BY	36	GLN
46	BY	46	VAL
46	BY	57	LEU
48	B0	18	SER
48	B0	55	ILE
49	B1	17	THR
53	B5	51	ASP
53	B5	60	ARG
53	B5	86	GLU
53	B5	180	SER
53	B5	215	VAL
2	CB	35	ARG
2	CB	36	ASN
2	CB	51	ASN
2	CB	116	ASP
2	CB	120	GLN
2	CB	166	ALA
2	CB	170	HIS

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Mol	Chain	Res	Type
2	CB	208	ARG
2	CB	222	ARG
3	CC	66	VAL
3	CC	127	ARG
3	CC	175	LEU
4	CD	23	SER
4	CD	28	ILE
4	CD	30	THR
4	CD	32	CYS
4	CD	33	LYS
4	CD	35	GLU
4	CD	174	ASP
4	CD	175	ALA
5	CE	12	GLN
5	CE	51	GLY
5	CE	99	ALA
5	CE	101	GLU
5	CE	122	ASN
5	CE	142	ASP
6	CF	13	ASP
6	CF	14	GLN
6	CF	17	GLN
6	CF	33	GLU
6	CF	91	ARG
7	CG	84	THR
7	CG	146	GLU
8	CH	89	LYS
10	CJ	36	VAL
10	CJ	41	PRO
10	CJ	57	VAL
10	CJ	95	GLY
11	CK	15	GLN
11	CK	78	GLY
11	CK	92	GLY
11	CK	126	LYS
12	CL	15	LYS
12	CL	17	ALA
12	CL	43	LYS
13	CM	7	ILE
13	CM	25	VAL
14	CN	22	ALA
14	CN	23	LYS

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Mol	Chain	Res	Type
14	CN	53	ARG
14	CN	59	ARG
14	CN	62	ASN
15	CO	20	ASN
16	CP	80	LYS
17	CQ	5	ILE
17	CQ	12	VAL
17	CQ	20	SER
17	CQ	76	VAL
18	CR	21	ILE
20	CT	7	ALA
21	CU	13	ASP
21	CU	52	ALA
24	DC	205	LEU
24	DC	240	PHE
24	DC	251	GLN
25	DD	36	GLN
25	DD	195	GLY
26	DE	86	ALA
27	DF	79	ILE
27	DF	143	TYR
27	DF	148	ARG
27	DF	176	PRO
28	DG	8	PRO
28	DG	159	GLY
29	DH	31	VAL
29	DH	77	THR
29	DH	118	PRO
30	DI	72	LYS
30	DI	84	ALA
30	DI	93	PRO
31	DJ	127	GLY
33	DL	30	THR
33	DL	54	GLN
33	DL	69	ARG
33	DL	111	ILE
34	DM	58	LYS
35	DN	3	HIS
36	DO	57	ALA
37	DP	24	ASP
37	DP	80	VAL
37	DP	93	ARG

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Mol	Chain	Res	Type
37	DP	114	LEU
39	DR	50	GLY
40	DS	63	GLY
40	DS	69	LEU
42	DU	7	ARG
42	DU	53	ASN
42	DU	57	GLY
42	DU	98	SER
42	DU	102	THR
44	DW	49	ALA
46	DY	46	VAL
46	DY	57	LEU
47	DZ	53	PHE
48	D0	55	ILE
49	D1	52	ALA
50	D2	45	SER
2	AB	13	GLY
2	AB	25	PRO
2	AB	95	ARG
2	AB	183	VAL
2	AB	193	PRO
2	AB	209	ALA
3	AC	3	GLN
3	AC	166	GLU
3	AC	206	GLU
4	AD	32	CYS
4	AD	166	GLU
5	AE	45	ARG
6	AF	6	ILE
7	AG	9	GLN
7	AG	12	ILE
7	AG	78	ARG
8	AH	21	ASN
8	AH	100	GLY
8	AH	115	ALA
9	AI	88	MET
10	AJ	16	ARG
10	AJ	38	GLY
10	AJ	75	ASP
10	AJ	100	ILE
11	AK	108	THR
13	AM	114	LYS

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Mol	Chain	Res	Type
14	AN	42	TRP
14	AN	44	ALA
15	AO	25	THR
16	AP	10	GLY
16	AP	12	LYS
16	AP	44	SER
17	AQ	12	VAL
17	AQ	82	ALA
19	AS	9	PRO
20	AT	5	LYS
21	AU	23	CYS
21	AU	52	ALA
24	BC	167	ARG
24	BC	210	ALA
26	BE	6	LYS
26	BE	200	LEU
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	72	LYS
31	BJ	81	ILE
32	BK	93	GLN
33	BL	36	LYS
35	BN	79	LEU
39	BR	52	PRO
41	BT	17	SER
41	BT	52	GLU
42	BU	8	ASP
42	BU	17	LYS
49	B1	52	ALA
53	B5	65	LEU
53	B5	66	PRO
53	B5	67	HIS
2	CB	13	GLY
2	CB	17	GLY
2	CB	34	ALA
2	CB	41	ILE
2	CB	63	ARG
2	CB	88	ASP
2	CB	141	LEU

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Mol	Chain	Res	Type
2	CB	209	ALA
3	CC	12	LEU
3	CC	80	LYS
3	CC	89	LYS
4	CD	4	TYR
4	CD	85	ASN
5	CE	24	THR
5	CE	147	MET
8	CH	54	ASP
8	CH	120	GLY
10	CJ	17	LEU
10	CJ	90	LEU
10	CJ	91	ASP
12	CL	4	VAL
13	CM	12	HIS
13	CM	24	GLY
13	CM	49	SER
13	CM	114	LYS
14	CN	13	ARG
16	CP	44	SER
16	CP	77	GLU
17	CQ	17	MET
17	CQ	53	CYS
18	CR	25	ASP
18	CR	34	THR
19	CS	6	LYS
20	CT	68	HIS
21	CU	10	GLU
21	CU	35	ARG
24	DC	143	ASN
25	DD	194	PRO
26	DE	129	PRO
27	DF	175	PHE
27	DF	177	PHE
28	DG	12	PRO
28	DG	28	GLY
29	DH	16	GLY
29	DH	40	THR
30	DI	100	LYS
33	DL	53	GLY
35	DN	14	SER
36	DO	114	GLY

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Mol	Chain	Res	Type
37	DP	94	LYS
37	DP	95	ALA
37	DP	111	LYS
38	DQ	102	ASP
39	DR	31	GLU
39	DR	70	GLU
40	DS	107	VAL
41	DT	7	LEU
41	DT	73	ARG
42	DU	20	GLY
42	DU	60	GLU
42	DU	99	ASN
43	DV	84	PRO
45	DX	70	GLU
46	DY	61	ALA
2	AB	19	GLN
2	AB	20	THR
2	AB	33	GLY
2	AB	43	LEU
2	AB	97	LEU
3	AC	146	ALA
4	AD	98	LEU
4	AD	109	ALA
4	AD	126	ASN
4	AD	161	LEU
4	AD	167	LYS
4	AD	182	PHE
6	AF	54	LEU
8	AH	50	LYS
8	AH	57	PRO
8	AH	69	LYS
9	AI	9	THR
9	AI	50	GLN
10	AJ	43	PRO
11	AK	126	LYS
11	AK	127	ARG
12	AL	102	LEU
13	AM	48	LEU
16	AP	43	ALA
16	AP	49	GLY
16	AP	50	THR
19	AS	6	LYS

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Mol	Chain	Res	Type
20	AT	7	ALA
21	AU	25	LYS
25	BD	86	GLU
25	BD	114	LYS
25	BD	148	GLN
27	BF	21	ASN
27	BF	175	PHE
29	BH	83	LYS
30	BI	6	GLN
30	BI	7	ALA
32	BK	119	ALA
33	BL	114	GLY
36	BO	77	ALA
41	BT	18	GLU
49	B1	23	THR
51	B3	28	ASN
53	B5	176	VAL
2	CB	19	GLN
2	CB	126	PHE
4	CD	10	LYS
4	CD	36	GLN
4	CD	47	ARG
4	CD	149	ALA
4	CD	154	ARG
4	CD	192	SER
5	CE	155	ALA
6	CF	15	SER
6	CF	18	VAL
6	CF	54	LEU
6	CF	95	ALA
7	CG	3	ARG
8	CH	31	LYS
8	CH	67	GLN
9	CI	39	PHE
9	CI	55	VAL
9	CI	129	LYS
12	CL	34	CYS
13	CM	44	LYS
14	CN	3	LYS
14	CN	50	THR
15	CO	46	HIS
17	CQ	70	THR

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Mol	Chain	Res	Type
19	CS	28	LYS
20	CT	41	ALA
20	CT	67	ILE
21	CU	11	PRO
24	DC	29	PRO
24	DC	158	ALA
24	DC	253	LYS
25	DD	57	ALA
26	DE	18	THR
26	DE	122	GLU
27	DF	103	LEU
28	DG	47	ASP
29	DH	9	VAL
30	DI	15	ALA
32	DK	48	PRO
32	DK	93	GLN
33	DL	29	LYS
33	DL	42	SER
33	DL	138	ALA
34	DM	21	ALA
34	DM	59	ARG
34	DM	79	ALA
37	DP	105	GLY
42	DU	58	ILE
45	DX	7	VAL
45	DX	51	VAL
46	DY	37	LEU
48	D0	52	ARG
51	D3	52	LYS
2	AB	161	LEU
3	AC	54	ARG
3	AC	89	LYS
4	AD	26	ARG
4	AD	37	ALA
5	AE	88	VAL
5	AE	157	ARG
6	AF	93	LYS
9	AI	58	VAL
10	AJ	28	THR
10	AJ	35	GLN
10	AJ	41	PRO
10	AJ	42	LEU

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Mol	Chain	Res	Type
10	AJ	62	ARG
10	AJ	93	ALA
11	AK	89	PRO
13	AM	10	PRO
13	AM	111	GLY
14	AN	49	GLN
19	AS	64	ASP
24	BC	161	TYR
25	BD	2	ILE
25	BD	104	VAL
27	BF	146	VAL
30	BI	24	VAL
30	BI	84	ALA
30	BI	98	VAL
32	BK	110	GLU
36	BO	87	ILE
41	BT	28	ASN
42	BU	19	LYS
46	BY	20	ASN
53	B5	53	ARG
53	B5	90	ALA
53	B5	141	PRO
53	B5	182	PRO
53	B5	207	GLY
53	B5	217	THR
2	CB	12	ALA
2	CB	127	ASP
4	CD	148	LYS
5	CE	102	GLY
5	CE	113	ALA
6	CF	94	HIS
7	CG	82	GLY
8	CH	57	PRO
8	CH	96	MET
9	CI	53	GLU
10	CJ	42	LEU
11	CK	93	ARG
12	CL	78	SER
14	CN	60	GLN
14	CN	64	CYS
15	CO	18	ASP
16	CP	42	ILE

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Mol	Chain	Res	Type
17	CQ	80	GLU
25	DD	94	GLN
26	DE	61	ARG
26	DE	80	SER
27	DF	174	ASP
30	DI	134	ARG
33	DL	4	ASN
33	DL	36	LYS
33	DL	94	THR
36	DO	77	ALA
39	DR	82	HIS
40	DS	14	ALA
41	DT	10	VAL
45	DX	50	ARG
46	DY	36	GLN
47	DZ	4	THR
49	D1	5	ILE
51	D3	53	GLY
2	AB	53	ALA
2	AB	79	ALA
2	AB	166	ALA
3	AC	66	VAL
7	AG	140	ASP
8	AH	14	ILE
8	AH	78	VAL
15	AO	21	ASP
15	AO	46	HIS
17	AQ	35	GLY
19	AS	13	LEU
19	AS	14	HIS
20	AT	67	ILE
20	AT	82	GLN
27	BF	78	LYS
29	BH	120	GLY
33	BL	86	GLU
39	BR	50	GLY
42	BU	98	SER
49	B1	51	GLU
53	B5	151	GLY
2	CB	86	SER
3	CC	174	PRO
4	CD	5	LEU

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Mol	Chain	Res	Type
4	CD	37	ALA
4	CD	165	ARG
8	CH	75	ILE
24	DC	218	PRO
26	DE	62	GLN
30	DI	13	VAL
32	DK	110	GLU
32	DK	120	PRO
35	DN	109	PRO
36	DO	66	GLY
37	DP	14	LYS
37	DP	84	ILE
39	DR	53	PHE
40	DS	66	ILE
45	DX	44	LYS
4	AD	101	VAL
11	AK	16	VAL
13	AM	64	VAL
28	BG	79	VAL
53	B5	204	GLY
2	CB	149	GLY
5	CE	42	GLY
5	CE	57	PRO
8	AH	34	VAL
9	AI	51	PRO
9	AI	72	ILE
34	BM	26	VAL
2	CB	33	GLY
9	CI	58	VAL
9	CI	104	VAL
11	CK	89	PRO
11	CK	120	GLY
26	DE	82	GLY
30	DI	140	VAL
34	DM	57	VAL
2	AB	80	VAL
2	AB	182	PRO
6	AF	36	ILE
42	BU	39	ILE
53	B5	213	VAL
3	CC	84	VAL
7	CG	12	ILE

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Mol	Chain	Res	Type
14	CN	11	VAL
19	CS	30	PRO
24	DC	85	PRO
26	DE	73	ILE
27	DF	149	VAL
33	DL	140	GLY
34	DM	3	GLN
36	DO	90	VAL
41	DT	13	ALA
45	DX	31	PRO
51	D3	20	GLY
2	AB	149	GLY
10	AJ	39	PRO
24	BC	234	GLY
40	BS	74	ILE
9	CI	23	PRO
11	CK	91	PRO
20	CT	42	GLY
34	DM	23	GLY
50	D2	38	GLY
36	BO	103	VAL
5	CE	143	GLY
5	CE	158	GLY
27	DF	85	ILE
28	DG	154	PRO
39	DR	101	ILE

5.3.2 Protein sidechains

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	180/180 (100%)	130 (72%)	50 (28%)	0 1
2	CB	180/180 (100%)	135 (75%)	45 (25%)	0 2
3	AC	170/170 (100%)	128 (75%)	42 (25%)	1 2
3	CC	170/170 (100%)	135 (79%)	35 (21%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	AD	172/172 (100%)	138 (80%)	34 (20%)	1	5
4	CD	172/172 (100%)	141 (82%)	31 (18%)	2	6
5	AE	113/113 (100%)	81 (72%)	32 (28%)	0	1
5	CE	113/113 (100%)	84 (74%)	29 (26%)	0	2
6	AF	87/87 (100%)	63 (72%)	24 (28%)	0	1
6	CF	87/87 (100%)	61 (70%)	26 (30%)	0	1
7	AG	124/124 (100%)	89 (72%)	35 (28%)	0	1
7	CG	124/124 (100%)	91 (73%)	33 (27%)	0	1
8	AH	104/104 (100%)	82 (79%)	22 (21%)	1	4
8	CH	104/104 (100%)	79 (76%)	25 (24%)	1	2
9	AI	105/105 (100%)	76 (72%)	29 (28%)	0	1
9	CI	105/105 (100%)	79 (75%)	26 (25%)	1	2
10	AJ	86/86 (100%)	63 (73%)	23 (27%)	0	1
10	CJ	86/86 (100%)	68 (79%)	18 (21%)	1	4
11	AK	90/90 (100%)	67 (74%)	23 (26%)	0	2
11	CK	90/90 (100%)	64 (71%)	26 (29%)	0	1
12	AL	103/103 (100%)	90 (87%)	13 (13%)	4	14
12	CL	103/103 (100%)	82 (80%)	21 (20%)	1	4
13	AM	92/92 (100%)	67 (73%)	25 (27%)	0	1
13	CM	92/92 (100%)	70 (76%)	22 (24%)	1	3
14	AN	79/83 (95%)	65 (82%)	14 (18%)	2	6
14	CN	79/83 (95%)	67 (85%)	12 (15%)	3	9
15	AO	75/76 (99%)	63 (84%)	12 (16%)	2	8
15	CO	75/76 (99%)	58 (77%)	17 (23%)	1	3
16	AP	65/65 (100%)	49 (75%)	16 (25%)	1	2
16	CP	65/65 (100%)	52 (80%)	13 (20%)	1	4
17	AQ	74/74 (100%)	51 (69%)	23 (31%)	0	1
17	CQ	74/74 (100%)	49 (66%)	25 (34%)	0	0
18	AR	48/48 (100%)	38 (79%)	10 (21%)	1	4
18	CR	48/48 (100%)	37 (77%)	11 (23%)	1	3
19	AS	70/70 (100%)	55 (79%)	15 (21%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
19	CS	70/70 (100%)	57 (81%)	13 (19%)	1 5
20	AT	65/65 (100%)	48 (74%)	17 (26%)	0 2
20	CT	65/65 (100%)	47 (72%)	18 (28%)	0 1
21	AU	44/44 (100%)	28 (64%)	16 (36%)	0 0
21	CU	44/44 (100%)	28 (64%)	16 (36%)	0 0
24	BC	216/216 (100%)	182 (84%)	34 (16%)	2 9
24	DC	216/216 (100%)	176 (82%)	40 (18%)	1 5
25	BD	164/164 (100%)	147 (90%)	17 (10%)	7 23
25	DD	164/164 (100%)	144 (88%)	20 (12%)	5 16
26	BE	165/165 (100%)	138 (84%)	27 (16%)	2 8
26	DE	165/165 (100%)	139 (84%)	26 (16%)	2 8
27	BF	148/148 (100%)	111 (75%)	37 (25%)	0 2
27	DF	148/148 (100%)	122 (82%)	26 (18%)	2 6
28	BG	137/137 (100%)	124 (90%)	13 (10%)	8 26
28	DG	137/137 (100%)	117 (85%)	20 (15%)	3 10
29	BH	114/114 (100%)	81 (71%)	33 (29%)	0 1
29	DH	114/114 (100%)	89 (78%)	25 (22%)	1 3
30	BI	109/109 (100%)	78 (72%)	31 (28%)	0 1
30	DI	109/109 (100%)	78 (72%)	31 (28%)	0 1
31	BJ	116/116 (100%)	106 (91%)	10 (9%)	10 30
31	DJ	116/116 (100%)	97 (84%)	19 (16%)	2 8
32	BK	103/103 (100%)	92 (89%)	11 (11%)	6 22
32	DK	103/103 (100%)	94 (91%)	9 (9%)	9 30
33	BL	102/102 (100%)	87 (85%)	15 (15%)	3 10
33	DL	102/102 (100%)	86 (84%)	16 (16%)	2 9
34	BM	109/109 (100%)	99 (91%)	10 (9%)	8 27
34	DM	109/109 (100%)	100 (92%)	9 (8%)	10 32
35	BN	100/100 (100%)	88 (88%)	12 (12%)	5 16
35	DN	100/100 (100%)	80 (80%)	20 (20%)	1 4
36	BO	86/86 (100%)	68 (79%)	18 (21%)	1 4
36	DO	86/86 (100%)	72 (84%)	14 (16%)	2 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
37	BP	99/99 (100%)	91 (92%)	8 (8%)	11 33
37	DP	99/99 (100%)	80 (81%)	19 (19%)	1 5
38	BQ	89/89 (100%)	79 (89%)	10 (11%)	6 19
38	DQ	89/89 (100%)	77 (86%)	12 (14%)	4 12
39	BR	84/84 (100%)	69 (82%)	15 (18%)	2 6
39	DR	84/84 (100%)	70 (83%)	14 (17%)	2 7
40	BS	93/93 (100%)	78 (84%)	15 (16%)	2 8
40	DS	93/93 (100%)	75 (81%)	18 (19%)	1 5
41	BT	80/80 (100%)	64 (80%)	16 (20%)	1 4
41	DT	80/80 (100%)	65 (81%)	15 (19%)	1 5
42	BU	83/83 (100%)	69 (83%)	14 (17%)	2 7
42	DU	83/83 (100%)	65 (78%)	18 (22%)	1 3
43	BV	78/78 (100%)	66 (85%)	12 (15%)	2 9
43	DV	78/78 (100%)	65 (83%)	13 (17%)	2 7
44	BW	57/58 (98%)	50 (88%)	7 (12%)	4 15
44	DW	56/58 (97%)	51 (91%)	5 (9%)	9 28
45	BX	67/67 (100%)	55 (82%)	12 (18%)	2 6
45	DX	67/67 (100%)	51 (76%)	16 (24%)	1 3
46	BY	55/55 (100%)	47 (86%)	8 (14%)	3 10
46	DY	55/55 (100%)	40 (73%)	15 (27%)	0 1
47	BZ	48/48 (100%)	42 (88%)	6 (12%)	4 15
47	DZ	48/48 (100%)	33 (69%)	15 (31%)	0 1
48	B0	47/47 (100%)	41 (87%)	6 (13%)	4 14
48	D0	47/47 (100%)	42 (89%)	5 (11%)	6 22
49	B1	45/45 (100%)	35 (78%)	10 (22%)	1 3
49	D1	45/45 (100%)	40 (89%)	5 (11%)	6 20
50	B2	38/38 (100%)	34 (90%)	4 (10%)	6 22
50	D2	38/38 (100%)	30 (79%)	8 (21%)	1 4
51	B3	51/51 (100%)	47 (92%)	4 (8%)	11 35
51	D3	51/51 (100%)	44 (86%)	7 (14%)	3 12
52	B4	34/34 (100%)	27 (79%)	7 (21%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
52	D4	34/34 (100%)	30 (88%)	4 (12%)	5 17
53	B5	61/180 (34%)	45 (74%)	16 (26%)	0 2
All	All	9386/9518 (99%)	7547 (80%)	1839 (20%)	1 5

All (1839) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	9	MET
2	AB	14	VAL
2	AB	15	HIS
2	AB	16	PHE
2	AB	19	GLN
2	AB	25	PRO
2	AB	27	MET
2	AB	31	ILE
2	AB	32	PHE
2	AB	40	ILE
2	AB	41	ILE
2	AB	43	LEU
2	AB	50	PHE
2	AB	54	LEU
2	AB	59	LYS
2	AB	60	ILE
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU
2	AB	85	LEU
2	AB	87	CYS
2	AB	88	ASP
2	AB	95	ARG
2	AB	100	MET
2	AB	101	LEU
2	AB	107	VAL
2	AB	111	ILE
2	AB	117	LEU
2	AB	122	GLN
2	AB	126	PHE
2	AB	129	LEU
2	AB	132	LYS
2	AB	133	GLU
2	AB	135	LEU

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Mol	Chain	Res	Type
2	AB	140	GLU
2	AB	141	LEU
2	AB	143	LYS
2	AB	144	LEU
2	AB	148	LEU
2	AB	153	ASP
2	AB	161	LEU
2	AB	163	VAL
2	AB	164	ILE
2	AB	186	ILE
2	AB	199	VAL
2	AB	207	ILE
2	AB	208	ARG
2	AB	212	LEU
2	AB	225	ARG
2	AB	226	SER
3	AC	3	GLN
3	AC	14	ILE
3	AC	16	LYS
3	AC	18	TRP
3	AC	20	SER
3	AC	21	THR
3	AC	26	THR
3	AC	27	LYS
3	AC	28	GLU
3	AC	33	LEU
3	AC	37	PHE
3	AC	38	LYS
3	AC	41	GLN
3	AC	43	LEU
3	AC	52	VAL
3	AC	55	ILE
3	AC	57	ILE
3	AC	58	GLU
3	AC	59	ARG
3	AC	63	SER
3	AC	64	ILE
3	AC	75	ILE
3	AC	88	ARG
3	AC	97	VAL
3	AC	103	ILE
3	AC	122	SER

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Mol	Chain	Res	Type
3	AC	127	ARG
3	AC	131	ARG
3	AC	139	GLN
3	AC	142	MET
3	AC	144	LEU
3	AC	151	VAL
3	AC	165	THR
3	AC	167	TRP
3	AC	173	VAL
3	AC	182	ILE
3	AC	185	ASN
3	AC	186	THR
3	AC	191	THR
3	AC	200	VAL
3	AC	202	ILE
3	AC	207	ILE
4	AD	5	LEU
4	AD	13	ARG
4	AD	17	THR
4	AD	23	SER
4	AD	31	LYS
4	AD	32	CYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	44	ARG
4	AD	45	LYS
4	AD	47	ARG
4	AD	58	LYS
4	AD	69	GLU
4	AD	93	LEU
4	AD	104	ARG
4	AD	111	ARG
4	AD	116	GLN
4	AD	123	ILE
4	AD	132	ILE
4	AD	142	VAL
4	AD	143	VAL
4	AD	144	SER
4	AD	150	LYS
4	AD	151	LYS
4	AD	161	LEU
4	AD	163	GLU

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Mol	Chain	Res	Type
4	AD	164	GLN
4	AD	172	GLU
4	AD	173	VAL
4	AD	183	LYS
4	AD	190	ASP
4	AD	195	ILE
4	AD	198	HIS
4	AD	206	LYS
5	AE	10	GLU
5	AE	14	LYS
5	AE	15	LEU
5	AE	18	VAL
5	AE	19	ASN
5	AE	21	VAL
5	AE	25	VAL
5	AE	26	LYS
5	AE	37	THR
5	AE	38	VAL
5	AE	46	VAL
5	AE	61	GLN
5	AE	65	GLU
5	AE	72	ILE
5	AE	73	ASN
5	AE	74	VAL
5	AE	83	HIS
5	AE	85	VAL
5	AE	114	VAL
5	AE	115	LEU
5	AE	122	ASN
5	AE	123	VAL
5	AE	124	LEU
5	AE	130	SER
5	AE	134	ILE
5	AE	136	VAL
5	AE	137	VAL
5	AE	140	THR
5	AE	141	ILE
5	AE	147	MET
5	AE	149	SER
5	AE	153	VAL
6	AF	5	GLU
6	AF	7	VAL

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Mol	Chain	Res	Type
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN
6	AF	24	ARG
6	AF	35	LYS
6	AF	39	LEU
6	AF	51	ILE
6	AF	52	ASN
6	AF	53	LYS
6	AF	54	LEU
6	AF	55	HIS
6	AF	62	MET
6	AF	63	ASN
6	AF	68	GLN
6	AF	82	ASP
6	AF	84	VAL
6	AF	85	ILE
6	AF	86	ARG
6	AF	87	SER
6	AF	89	VAL
6	AF	96	VAL
6	AF	98	GLU
7	AG	4	ARG
7	AG	6	VAL
7	AG	10	ARG
7	AG	13	LEU
7	AG	22	LEU
7	AG	23	LEU
7	AG	32	VAL
7	AG	36	LYS
7	AG	40	GLU
7	AG	43	VAL
7	AG	47	LEU
7	AG	48	GLU
7	AG	49	THR
7	AG	50	LEU
7	AG	59	LEU
7	AG	63	GLU
7	AG	70	ARG
7	AG	78	ARG
7	AG	79	ARG
7	AG	80	VAL

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Mol	Chain	Res	Type
7	AG	83	SER
7	AG	86	GLN
7	AG	90	GLU
7	AG	91	VAL
7	AG	97	ASN
7	AG	109	ARG
7	AG	115	SER
7	AG	120	LEU
7	AG	125	SER
7	AG	135	VAL
7	AG	136	LYS
7	AG	138	ARG
7	AG	139	GLU
7	AG	142	HIS
7	AG	146	GLU
8	AH	3	MET
8	AH	7	ILE
8	AH	13	ARG
8	AH	22	LYS
8	AH	38	ASN
8	AH	42	GLU
8	AH	46	ILE
8	AH	51	VAL
8	AH	59	LEU
8	AH	60	GLU
8	AH	75	ILE
8	AH	83	LEU
8	AH	87	LYS
8	AH	89	LYS
8	AH	99	LEU
8	AH	104	VAL
8	AH	111	MET
8	AH	117	ARG
8	AH	121	LEU
8	AH	125	ILE
8	AH	126	ILE
8	AH	129	VAL
9	AI	14	SER
9	AI	18	ARG
9	AI	30	ILE
9	AI	36	GLU
9	AI	43	THR

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Mol	Chain	Res	Type
9	AI	46	MET
9	AI	47	VAL
9	AI	48	VAL
9	AI	49	ARG
9	AI	55	VAL
9	AI	57	MET
9	AI	60	LYS
9	AI	61	LEU
9	AI	63	LEU
9	AI	65	ILE
9	AI	68	LYS
9	AI	85	ARG
9	AI	88	MET
9	AI	89	GLU
9	AI	90	TYR
9	AI	94	LEU
9	AI	97	GLU
9	AI	111	VAL
9	AI	114	LYS
9	AI	115	LYS
9	AI	116	VAL
9	AI	119	ARG
9	AI	127	PHE
9	AI	129	LYS
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	11	LYS
10	AJ	17	LEU
10	AJ	19	ASP
10	AJ	25	ILE
10	AJ	35	GLN
10	AJ	40	ILE
10	AJ	44	THR
10	AJ	45	ARG
10	AJ	52	LEU
10	AJ	53	ILE
10	AJ	57	VAL
10	AJ	59	LYS
10	AJ	67	ILE
10	AJ	69	THR
10	AJ	73	LEU
10	AJ	84	VAL

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Mol	Chain	Res	Type
10	AJ	87	LEU
10	AJ	89	ARG
10	AJ	91	ASP
10	AJ	92	LEU
10	AJ	102	LEU
11	AK	16	VAL
11	AK	17	SER
11	AK	23	ILE
11	AK	31	ILE
11	AK	32	VAL
11	AK	50	SER
11	AK	52	PHE
11	AK	56	ARG
11	AK	58	SER
11	AK	65	VAL
11	AK	76	GLU
11	AK	81	ASN
11	AK	95	SER
11	AK	97	ILE
11	AK	100	LEU
11	AK	108	THR
11	AK	111	THR
11	AK	112	ASP
11	AK	114	THR
11	AK	119	ASN
11	AK	126	LYS
11	AK	127	ARG
11	AK	129	VAL
12	AL	10	LYS
12	AL	15	LYS
12	AL	16	VAL
12	AL	29	GLN
12	AL	33	VAL
12	AL	44	LYS
12	AL	54	ARG
12	AL	62	GLU
12	AL	89	ASP
12	AL	102	LEU
12	AL	105	SER
12	AL	114	ARG
12	AL	121	ARG
13	AM	4	ILE

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Mol	Chain	Res	Type
13	AM	7	ILE
13	AM	9	ILE
13	AM	11	ASP
13	AM	13	LYS
13	AM	16	VAL
13	AM	27	LYS
13	AM	29	ARG
13	AM	34	LEU
13	AM	59	GLU
13	AM	65	VAL
13	AM	71	ARG
13	AM	72	GLU
13	AM	75	MET
13	AM	77	ILE
13	AM	79	ARG
13	AM	80	LEU
13	AM	83	LEU
13	AM	87	ARG
13	AM	90	ARG
13	AM	93	ARG
13	AM	103	LYS
13	AM	107	ARG
13	AM	108	THR
13	AM	110	LYS
14	AN	10	GLU
14	AN	24	ARG
14	AN	26	GLU
14	AN	28	LYS
14	AN	31	ILE
14	AN	34	VAL
14	AN	46	LEU
14	AN	49	GLN
14	AN	51	LEU
14	AN	69	ARG
14	AN	84	VAL
14	AN	85	ARG
14	AN	98	LYS
14	AN	100	SER
15	AO	6	GLU
15	AO	22	THR
15	AO	31	LEU
15	AO	35	GLN

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Mol	Chain	Res	Type
15	AO	38	HIS
15	AO	39	LEU
15	AO	40	GLN
15	AO	67	LEU
15	AO	83	GLU
15	AO	85	LEU
15	AO	87	LEU
15	AO	89	ARG
16	AP	1	MET
16	AP	2	VAL
16	AP	6	LEU
16	AP	18	GLN
16	AP	19	VAL
16	AP	20	VAL
16	AP	36	VAL
16	AP	46	LYS
16	AP	51	ARG
16	AP	63	GLN
16	AP	70	ARG
16	AP	71	VAL
16	AP	75	ILE
16	AP	76	LYS
16	AP	77	GLU
16	AP	78	VAL
17	AQ	4	LYS
17	AQ	12	VAL
17	AQ	13	VAL
17	AQ	21	ILE
17	AQ	25	ILE
17	AQ	26	GLU
17	AQ	27	ARG
17	AQ	29	VAL
17	AQ	30	LYS
17	AQ	38	ILE
17	AQ	42	THR
17	AQ	51	ASN
17	AQ	52	GLU
17	AQ	55	ILE
17	AQ	59	VAL
17	AQ	61	ILE
17	AQ	68	SER
17	AQ	69	LYS

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Mol	Chain	Res	Type
17	AQ	70	THR
17	AQ	75	LEU
17	AQ	76	VAL
17	AQ	78	VAL
17	AQ	81	LYS
18	AR	21	ILE
18	AR	25	ASP
18	AR	29	LEU
18	AR	31	ASN
18	AR	33	ILE
18	AR	34	THR
18	AR	43	ARG
18	AR	48	ARG
18	AR	55	LEU
18	AR	71	THR
19	AS	6	LYS
19	AS	13	LEU
19	AS	21	LYS
19	AS	24	GLU
19	AS	27	ASP
19	AS	29	LYS
19	AS	33	THR
19	AS	45	ILE
19	AS	51	VAL
19	AS	55	ARG
19	AS	58	VAL
19	AS	63	THR
19	AS	65	GLU
19	AS	70	LYS
19	AS	71	LEU
20	AT	3	ASN
20	AT	5	LYS
20	AT	6	SER
20	AT	8	LYS
20	AT	12	ILE
20	AT	16	LYS
20	AT	24	ARG
20	AT	27	MET
20	AT	29	ARG
20	AT	34	LYS
20	AT	36	TYR
20	AT	49	LYS

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Mol	Chain	Res	Type
20	AT	54	MET
20	AT	69	LYS
20	AT	70	ASN
20	AT	74	ARG
20	AT	86	LEU
21	AU	9	ASN
21	AU	10	GLU
21	AU	12	PHE
21	AU	13	ASP
21	AU	16	LEU
21	AU	18	ARG
21	AU	20	LYS
21	AU	23	CYS
21	AU	25	LYS
21	AU	28	VAL
21	AU	33	ARG
21	AU	34	ARG
21	AU	36	GLU
21	AU	37	PHE
21	AU	43	THR
21	AU	54	LYS
24	BC	5	LYS
24	BC	13	ARG
24	BC	14	ARG
24	BC	20	VAL
24	BC	24	LEU
24	BC	39	LYS
24	BC	63	ARG
24	BC	64	ILE
24	BC	65	VAL
24	BC	70	ASN
24	BC	86	ASN
24	BC	97	LYS
24	BC	105	LEU
24	BC	110	LEU
24	BC	111	LYS
24	BC	121	ASP
24	BC	125	LYS
24	BC	147	LYS
24	BC	154	LEU
24	BC	156	ARG
24	BC	164	ILE

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Mol	Chain	Res	Type
24	BC	172	VAL
24	BC	174	LEU
24	BC	177	ARG
24	BC	182	ARG
24	BC	183	LYS
24	BC	195	VAL
24	BC	203	ARG
24	BC	204	VAL
24	BC	205	LEU
24	BC	225	MET
24	BC	252	THR
24	BC	265	LYS
24	BC	268	VAL
25	BD	4	LEU
25	BD	12	THR
25	BD	14	ILE
25	BD	52	THR
25	BD	70	LYS
25	BD	73	VAL
25	BD	77	ARG
25	BD	89	GLU
25	BD	95	SER
25	BD	97	SER
25	BD	104	VAL
25	BD	121	THR
25	BD	133	THR
25	BD	141	ARG
25	BD	177	VAL
25	BD	183	GLU
25	BD	186	LEU
26	BE	4	VAL
26	BE	9	GLN
26	BE	10	SER
26	BE	12	LEU
26	BE	44	ARG
26	BE	63	LYS
26	BE	88	ARG
26	BE	93	SER
26	BE	94	GLN
26	BE	107	SER
26	BE	108	ILE
26	BE	116	ASP

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Mol	Chain	Res	Type
26	BE	120	VAL
26	BE	126	VAL
26	BE	131	THR
26	BE	136	GLN
26	BE	149	ILE
26	BE	159	LEU
26	BE	169	VAL
26	BE	173	THR
26	BE	176	ASP
26	BE	180	LEU
26	BE	185	LYS
26	BE	187	VAL
26	BE	194	LYS
26	BE	198	GLU
26	BE	200	LEU
27	BF	3	LYS
27	BF	14	LYS
27	BF	18	THR
27	BF	21	ASN
27	BF	23	ASN
27	BF	31	VAL
27	BF	33	LYS
27	BF	34	ILE
27	BF	35	THR
27	BF	36	LEU
27	BF	42	GLU
27	BF	44	ILE
27	BF	48	LYS
27	BF	49	LEU
27	BF	66	LEU
27	BF	67	ILE
27	BF	79	ILE
27	BF	81	GLN
27	BF	85	ILE
27	BF	89	VAL
27	BF	95	ARG
27	BF	101	GLU
27	BF	104	ILE
27	BF	105	THR
27	BF	106	ILE
27	BF	108	VAL
27	BF	112	ARG

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Mol	Chain	Res	Type
27	BF	120	LYS
27	BF	133	ARG
27	BF	141	ILE
27	BF	147	ASP
27	BF	152	LEU
27	BF	153	ASP
27	BF	154	ILE
27	BF	155	THR
27	BF	158	THR
27	BF	164	GLU
28	BG	9	VAL
28	BG	11	VAL
28	BG	27	LYS
28	BG	67	THR
28	BG	77	ILE
28	BG	87	LEU
28	BG	98	VAL
28	BG	99	LYS
28	BG	113	VAL
28	BG	124	GLU
28	BG	152	ARG
28	BG	155	GLU
28	BG	170	ARG
29	BH	1	MET
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	15	LEU
29	BH	27	ARG
29	BH	54	LEU
29	BH	60	GLU
29	BH	62	LEU
29	BH	66	ASN
29	BH	72	ILE
29	BH	75	LEU
29	BH	76	GLU
29	BH	77	THR
29	BH	79	THR
29	BH	86	ASP
29	BH	91	PHE
29	BH	108	VAL
29	BH	112	LYS

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Mol	Chain	Res	Type
29	BH	117	LEU
29	BH	119	ASN
29	BH	121	VAL
29	BH	122	LEU
29	BH	123	ARG
29	BH	125	THR
29	BH	127	GLU
29	BH	129	GLU
29	BH	131	SER
29	BH	137	GLU
29	BH	142	VAL
29	BH	143	ILE
29	BH	145	ASN
29	BH	146	VAL
30	BI	8	TYR
30	BI	9	VAL
30	BI	17	MET
30	BI	24	VAL
30	BI	28	LEU
30	BI	31	GLN
30	BI	34	ASN
30	BI	38	PHE
30	BI	40	LYS
30	BI	45	LYS
30	BI	50	GLU
30	BI	58	VAL
30	BI	60	THR
30	BI	62	TYR
30	BI	68	THR
30	BI	69	PHE
30	BI	72	LYS
30	BI	73	THR
30	BI	82	LYS
30	BI	86	ILE
30	BI	94	ASN
30	BI	96	ASP
30	BI	97	LYS
30	BI	100	LYS
30	BI	101	ILE
30	BI	103	ARG
30	BI	108	GLU
30	BI	123	GLU

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Mol	Chain	Res	Type
30	BI	132	THR
30	BI	134	ARG
30	BI	136	MET
31	BJ	5	THR
31	BJ	23	LYS
31	BJ	30	THR
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	84	ILE
31	BJ	101	ILE
31	BJ	124	VAL
32	BK	41	ILE
32	BK	44	LYS
32	BK	45	GLU
32	BK	49	ARG
32	BK	58	LEU
32	BK	66	LYS
32	BK	86	LEU
32	BK	88	ASN
32	BK	92	GLU
32	BK	117	SER
32	BK	121	GLU
33	BL	21	ARG
33	BL	35	HIS
33	BL	39	LYS
33	BL	40	SER
33	BL	60	ARG
33	BL	82	LEU
33	BL	85	VAL
33	BL	86	GLU
33	BL	89	VAL
33	BL	93	ASN
33	BL	100	ILE
33	BL	115	GLU
33	BL	136	GLU
33	BL	142	ILE
33	BL	144	GLU
34	BM	14	LYS
34	BM	22	GLN
34	BM	24	THR

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Mol	Chain	Res	Type
34	BM	47	GLU
34	BM	55	ARG
34	BM	59	ARG
34	BM	70	ASP
34	BM	86	LYS
34	BM	115	GLU
34	BM	126	ILE
35	BN	2	ARG
35	BN	6	SER
35	BN	8	ARG
35	BN	20	MET
35	BN	69	ARG
35	BN	71	ARG
35	BN	74	GLU
35	BN	76	VAL
35	BN	96	ARG
35	BN	116	VAL
35	BN	118	ARG
35	BN	120	GLU
36	BO	3	LYS
36	BO	4	LYS
36	BO	9	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	24	THR
36	BO	25	ARG
36	BO	27	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	45	SER
36	BO	47	VAL
36	BO	49	VAL
36	BO	54	VAL
36	BO	56	LYS
36	BO	83	LEU
36	BO	85	LYS
36	BO	88	LYS
37	BP	5	ILE
37	BP	26	VAL
37	BP	29	LYS
37	BP	63	LYS
37	BP	68	GLU

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Mol	Chain	Res	Type
37	BP	73	VAL
37	BP	102	GLU
37	BP	110	ILE
38	BQ	6	ARG
38	BQ	8	VAL
38	BQ	18	LEU
38	BQ	30	ARG
38	BQ	40	ILE
38	BQ	51	ARG
38	BQ	85	LYS
38	BQ	112	LYS
38	BQ	114	LYS
38	BQ	117	LEU
39	BR	10	LYS
39	BR	14	VAL
39	BR	29	THR
39	BR	32	THR
39	BR	38	VAL
39	BR	46	GLU
39	BR	48	LYS
39	BR	58	VAL
39	BR	60	LYS
39	BR	64	VAL
39	BR	74	ILE
39	BR	85	LYS
39	BR	87	GLN
39	BR	94	THR
39	BR	102	SER
40	BS	7	HIS
40	BS	19	LEU
40	BS	31	GLN
40	BS	37	THR
40	BS	53	SER
40	BS	55	ILE
40	BS	59	GLU
40	BS	69	LEU
40	BS	81	SER
40	BS	86	MET
40	BS	96	ILE
40	BS	97	LEU
40	BS	107	VAL
40	BS	108	SER

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Mol	Chain	Res	Type
40	BS	109	ASP
41	BT	5	GLU
41	BT	11	LEU
41	BT	12	ARG
41	BT	18	GLU
41	BT	22	THR
41	BT	30	ILE
41	BT	33	LYS
41	BT	34	VAL
41	BT	36	LYS
41	BT	49	LYS
41	BT	50	LEU
41	BT	52	GLU
41	BT	57	VAL
41	BT	73	ARG
41	BT	86	THR
41	BT	89	GLU
42	BU	9	ASP
42	BU	26	LYS
42	BU	31	SER
42	BU	33	LYS
42	BU	36	VAL
42	BU	47	LYS
42	BU	52	LEU
42	BU	61	LYS
42	BU	68	SER
42	BU	72	ILE
42	BU	77	THR
42	BU	91	LYS
42	BU	99	ASN
42	BU	101	GLU
43	BV	1	MET
43	BV	8	VAL
43	BV	10	LYS
43	BV	17	SER
43	BV	29	ILE
43	BV	34	LYS
43	BV	41	GLU
43	BV	61	LEU
43	BV	65	VAL
43	BV	70	ILE
43	BV	71	LYS

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Mol	Chain	Res	Type
43	BV	92	VAL
44	BW	20	ARG
44	BW	29	GLU
44	BW	38	VAL
44	BW	39	ARG
44	BW	72	LYS
44	BW	82	ILE
44	BW	85	GLU
45	BX	2	SER
45	BX	5	CYS
45	BX	18	ARG
45	BX	25	THR
45	BX	28	ARG
45	BX	43	GLU
45	BX	45	ARG
45	BX	48	THR
45	BX	54	LYS
45	BX	64	ILE
45	BX	76	GLU
45	BX	77	LYS
46	BY	6	LEU
46	BY	16	THR
46	BY	22	LEU
46	BY	29	ARG
46	BY	37	LEU
46	BY	56	LEU
46	BY	58	ASN
46	BY	59	GLU
47	BZ	3	LYS
47	BZ	14	ILE
47	BZ	36	VAL
47	BZ	44	ILE
47	BZ	57	VAL
47	BZ	58	GLU
48	B0	6	ASN
48	B0	18	SER
48	B0	23	THR
48	B0	29	SER
48	B0	40	ARG
48	B0	53	LYS
49	B1	8	LYS
49	B1	9	ILE

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Mol	Chain	Res	Type
49	B1	11	LEU
49	B1	25	LYS
49	B1	28	ARG
49	B1	37	LYS
49	B1	43	VAL
49	B1	46	HIS
49	B1	47	VAL
49	B1	51	GLU
50	B2	16	HIS
50	B2	21	ARG
50	B2	42	LEU
50	B2	45	SER
51	B3	15	LYS
51	B3	30	ARG
51	B3	31	HIS
51	B3	47	LYS
52	B4	2	LYS
52	B4	4	ARG
52	B4	6	SER
52	B4	9	LYS
52	B4	18	LYS
52	B4	26	ILE
52	B4	37	GLN
53	B5	21	TYR
53	B5	23	ILE
53	B5	38	PHE
53	B5	41	THR
53	B5	47	LYS
53	B5	48	LEU
53	B5	59	VAL
53	B5	62	THR
53	B5	64	SER
53	B5	65	LEU
53	B5	73	VAL
53	B5	76	LEU
53	B5	78	ILE
53	B5	86	GLU
53	B5	88	GLU
53	B5	100	ILE
2	CB	11	LYS
2	CB	15	HIS
2	CB	16	PHE

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Mol	Chain	Res	Type
2	CB	19	GLN
2	CB	20	THR
2	CB	21	ARG
2	CB	24	ASN
2	CB	27	MET
2	CB	40	ILE
2	CB	43	LEU
2	CB	49	MET
2	CB	50	PHE
2	CB	66	LYS
2	CB	67	ILE
2	CB	68	LEU
2	CB	78	GLU
2	CB	80	VAL
2	CB	81	LYS
2	CB	85	LEU
2	CB	88	ASP
2	CB	102	THR
2	CB	103	ASN
2	CB	106	THR
2	CB	116	ASP
2	CB	117	LEU
2	CB	125	THR
2	CB	126	PHE
2	CB	130	THR
2	CB	144	LEU
2	CB	148	LEU
2	CB	163	VAL
2	CB	174	LYS
2	CB	179	LEU
2	CB	181	ILE
2	CB	187	VAL
2	CB	205	ASP
2	CB	207	ILE
2	CB	210	VAL
2	CB	212	LEU
2	CB	214	LEU
2	CB	217	VAL
2	CB	220	THR
2	CB	222	ARG
2	CB	223	GLU
2	CB	225	ARG

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Mol	Chain	Res	Type
3	CC	3	GLN
3	CC	16	LYS
3	CC	18	TRP
3	CC	26	THR
3	CC	27	LYS
3	CC	32	ASN
3	CC	33	LEU
3	CC	36	ASP
3	CC	37	PHE
3	CC	43	LEU
3	CC	45	LYS
3	CC	53	SER
3	CC	55	ILE
3	CC	64	ILE
3	CC	70	THR
3	CC	80	LYS
3	CC	83	ASP
3	CC	102	ASN
3	CC	103	ILE
3	CC	110	GLU
3	CC	111	LEU
3	CC	119	SER
3	CC	120	ILE
3	CC	121	THR
3	CC	129	MET
3	CC	140	ASN
3	CC	151	VAL
3	CC	153	VAL
3	CC	167	TRP
3	CC	168	TYR
3	CC	170	GLU
3	CC	175	LEU
3	CC	192	THR
3	CC	193	TYR
3	CC	206	GLU
4	CD	8	LYS
4	CD	9	LEU
4	CD	17	THR
4	CD	32	CYS
4	CD	33	LYS
4	CD	48	LEU
4	CD	50	ASP

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Mol	Chain	Res	Type
4	CD	54	GLN
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS
4	CD	59	GLN
4	CD	81	ARG
4	CD	83	LYS
4	CD	121	LYS
4	CD	132	ILE
4	CD	142	VAL
4	CD	148	LYS
4	CD	152	GLN
4	CD	155	VAL
4	CD	159	LEU
4	CD	161	LEU
4	CD	177	LYS
4	CD	183	LYS
4	CD	191	LEU
4	CD	192	SER
4	CD	194	ASP
4	CD	197	GLU
4	CD	200	ILE
4	CD	203	LEU
4	CD	206	LYS
5	CE	15	LEU
5	CE	18	VAL
5	CE	26	LYS
5	CE	32	SER
5	CE	39	VAL
5	CE	45	ARG
5	CE	46	VAL
5	CE	52	LYS
5	CE	65	GLU
5	CE	66	LYS
5	CE	71	MET
5	CE	76	LEU
5	CE	77	ASN
5	CE	81	LEU
5	CE	86	LYS
5	CE	96	MET
5	CE	97	GLN
5	CE	105	ILE

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Mol	Chain	Res	Type
5	CE	114	VAL
5	CE	115	LEU
5	CE	120	VAL
5	CE	124	LEU
5	CE	126	LYS
5	CE	131	THR
5	CE	137	VAL
5	CE	140	THR
5	CE	149	SER
5	CE	151	GLU
5	CE	156	LYS
6	CF	1	MET
6	CF	2	ARG
6	CF	7	VAL
6	CF	9	MET
6	CF	15	SER
6	CF	24	ARG
6	CF	26	THR
6	CF	30	THR
6	CF	36	ILE
6	CF	38	ARG
6	CF	51	ILE
6	CF	53	LYS
6	CF	54	LEU
6	CF	55	HIS
6	CF	56	LYS
6	CF	63	ASN
6	CF	64	VAL
6	CF	68	GLN
6	CF	79	ARG
6	CF	80	PHE
6	CF	81	ASN
6	CF	85	ILE
6	CF	86	ARG
6	CF	87	SER
6	CF	89	VAL
6	CF	97	THR
7	CG	6	VAL
7	CG	11	LYS
7	CG	12	ILE
7	CG	22	LEU
7	CG	23	LEU

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Mol	Chain	Res	Type
7	CG	30	LEU
7	CG	38	THR
7	CG	43	VAL
7	CG	45	SER
7	CG	47	LEU
7	CG	48	GLU
7	CG	53	ARG
7	CG	67	GLU
7	CG	69	VAL
7	CG	72	THR
7	CG	73	VAL
7	CG	75	VAL
7	CG	78	ARG
7	CG	84	THR
7	CG	87	VAL
7	CG	91	VAL
7	CG	94	VAL
7	CG	97	ASN
7	CG	120	LEU
7	CG	123	GLU
7	CG	125	SER
7	CG	126	ASP
7	CG	129	GLU
7	CG	133	THR
7	CG	135	VAL
7	CG	136	LYS
7	CG	140	ASP
7	CG	146	GLU
8	CH	13	ARG
8	CH	22	LYS
8	CH	25	VAL
8	CH	31	LYS
8	CH	36	ILE
8	CH	47	GLU
8	CH	49	PHE
8	CH	51	VAL
8	CH	54	ASP
8	CH	55	THR
8	CH	59	LEU
8	CH	73	GLU
8	CH	74	SER
8	CH	75	ILE

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Mol	Chain	Res	Type
8	CH	77	ARG
8	CH	83	LEU
8	CH	92	LEU
8	CH	94	LYS
8	CH	103	VAL
8	CH	104	VAL
8	CH	111	MET
8	CH	112	THR
8	CH	121	LEU
8	CH	125	ILE
8	CH	126	ILE
9	CI	9	THR
9	CI	13	LYS
9	CI	18	ARG
9	CI	21	ILE
9	CI	28	ILE
9	CI	32	GLN
9	CI	39	PHE
9	CI	43	THR
9	CI	45	ARG
9	CI	46	MET
9	CI	55	VAL
9	CI	57	MET
9	CI	60	LYS
9	CI	62	ASP
9	CI	68	LYS
9	CI	80	ARG
9	CI	85	ARG
9	CI	88	MET
9	CI	90	TYR
9	CI	94	LEU
9	CI	97	GLU
9	CI	100	LYS
9	CI	105	THR
9	CI	112	GLU
9	CI	127	PHE
9	CI	129	LYS
10	CJ	5	ARG
10	CJ	16	ARG
10	CJ	22	THR
10	CJ	25	ILE
10	CJ	26	VAL

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Mol	Chain	Res	Type
10	CJ	27	GLU
10	CJ	32	THR
10	CJ	59	LYS
10	CJ	69	THR
10	CJ	77	VAL
10	CJ	80	THR
10	CJ	83	THR
10	CJ	84	VAL
10	CJ	87	LEU
10	CJ	89	ARG
10	CJ	91	ASP
10	CJ	92	LEU
10	CJ	102	LEU
11	CK	14	LYS
11	CK	15	GLN
11	CK	31	ILE
11	CK	33	THR
11	CK	64	GLN
11	CK	65	VAL
11	CK	74	VAL
11	CK	76	GLU
11	CK	77	TYR
11	CK	80	LYS
11	CK	81	ASN
11	CK	82	LEU
11	CK	83	GLU
11	CK	86	VAL
11	CK	93	ARG
11	CK	96	THR
11	CK	100	LEU
11	CK	101	ASN
11	CK	106	ARG
11	CK	107	ILE
11	CK	108	THR
11	CK	109	ASN
11	CK	110	ILE
11	CK	125	LYS
11	CK	126	LYS
11	CK	128	ARG
12	CL	3	THR
12	CL	4	VAL
12	CL	5	ASN

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Mol	Chain	Res	Type
12	CL	10	LYS
12	CL	16	VAL
12	CL	18	LYS
12	CL	20	ASN
12	CL	29	GLN
12	CL	34	CYS
12	CL	44	LYS
12	CL	59	ASN
12	CL	61	PHE
12	CL	63	VAL
12	CL	82	ILE
12	CL	86	ARG
12	CL	89	ASP
12	CL	94	ARG
12	CL	97	THR
12	CL	110	ARG
12	CL	114	ARG
12	CL	121	ARG
13	CM	8	ASN
13	CM	14	HIS
13	CM	19	LEU
13	CM	25	VAL
13	CM	29	ARG
13	CM	31	LYS
13	CM	48	LEU
13	CM	53	ILE
13	CM	54	ASP
13	CM	59	GLU
13	CM	60	VAL
13	CM	66	GLU
13	CM	76	SER
13	CM	80	LEU
13	CM	83	LEU
13	CM	90	ARG
13	CM	91	HIS
13	CM	92	ARG
13	CM	93	ARG
13	CM	100	GLN
13	CM	101	ARG
13	CM	102	THR
14	CN	14	VAL
14	CN	16	LEU

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Mol	Chain	Res	Type
14	CN	18	ASP
14	CN	21	PHE
14	CN	26	GLU
14	CN	28	LYS
14	CN	48	LEU
14	CN	49	GLN
14	CN	60	GLN
14	CN	67	THR
14	CN	80	SER
14	CN	90	ARG
15	CO	4	SER
15	CO	6	GLU
15	CO	10	LYS
15	CO	11	ILE
15	CO	13	SER
15	CO	18	ASP
15	CO	26	GLU
15	CO	27	VAL
15	CO	35	GLN
15	CO	38	HIS
15	CO	39	LEU
15	CO	62	GLN
15	CO	66	LEU
15	CO	67	LEU
15	CO	70	LEU
15	CO	85	LEU
15	CO	87	LEU
16	CP	1	MET
16	CP	2	VAL
16	CP	18	GLN
16	CP	20	VAL
16	CP	25	ARG
16	CP	29	ASN
16	CP	31	ARG
16	CP	36	VAL
16	CP	46	LYS
16	CP	57	ILE
16	CP	74	LEU
16	CP	77	GLU
16	CP	80	LYS
17	CQ	5	ILE
17	CQ	12	VAL

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Mol	Chain	Res	Type
17	CQ	13	VAL
17	CQ	14	SER
17	CQ	17	MET
17	CQ	18	GLU
17	CQ	23	VAL
17	CQ	25	ILE
17	CQ	28	PHE
17	CQ	29	VAL
17	CQ	33	ILE
17	CQ	38	ILE
17	CQ	40	ARG
17	CQ	41	THR
17	CQ	43	LYS
17	CQ	48	ASP
17	CQ	50	ASN
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	57	ASP
17	CQ	62	ARG
17	CQ	69	LYS
17	CQ	75	LEU
17	CQ	79	VAL
17	CQ	81	LYS
18	CR	20	GLU
18	CR	25	ASP
18	CR	26	ILE
18	CR	29	LEU
18	CR	33	ILE
18	CR	45	THR
18	CR	47	THR
18	CR	57	ARG
18	CR	61	ARG
18	CR	63	ARG
18	CR	67	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	11	ILE
19	CS	19	VAL
19	CS	21	LYS
19	CS	23	VAL
19	CS	33	THR

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Mol	Chain	Res	Type
19	CS	36	ARG
19	CS	39	THR
19	CS	43	ASN
19	CS	49	ILE
19	CS	56	GLN
20	CT	5	LYS
20	CT	6	SER
20	CT	8	LYS
20	CT	12	ILE
20	CT	14	SER
20	CT	15	GLU
20	CT	24	ARG
20	CT	27	MET
20	CT	29	ARG
20	CT	36	TYR
20	CT	49	LYS
20	CT	54	MET
20	CT	58	VAL
20	CT	64	LYS
20	CT	67	ILE
20	CT	69	LYS
20	CT	70	ASN
20	CT	76	LYS
21	CU	5	LYS
21	CU	7	ARG
21	CU	10	GLU
21	CU	12	PHE
21	CU	14	VAL
21	CU	16	LEU
21	CU	20	LYS
21	CU	24	GLU
21	CU	25	LYS
21	CU	28	VAL
21	CU	31	GLU
21	CU	34	ARG
21	CU	42	THR
21	CU	43	THR
21	CU	47	ARG
21	CU	53	VAL
24	DC	20	VAL
24	DC	36	LYS
24	DC	39	LYS

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Mol	Chain	Res	Type
24	DC	46	ASN
24	DC	54	ILE
24	DC	58	HIS
24	DC	59	LYS
24	DC	64	ILE
24	DC	79	GLU
24	DC	80	ARG
24	DC	88	SER
24	DC	103	TYR
24	DC	105	LEU
24	DC	110	LEU
24	DC	111	LYS
24	DC	118	SER
24	DC	124	ILE
24	DC	130	LEU
24	DC	141	VAL
24	DC	147	LYS
24	DC	153	GLN
24	DC	156	ARG
24	DC	160	THR
24	DC	162	VAL
24	DC	165	VAL
24	DC	167	ARG
24	DC	168	ASP
24	DC	174	LEU
24	DC	175	ARG
24	DC	178	SER
24	DC	195	VAL
24	DC	202	LEU
24	DC	204	VAL
24	DC	205	LEU
24	DC	221	ARG
24	DC	229	ASP
24	DC	250	VAL
24	DC	255	LYS
24	DC	259	SER
24	DC	267	ILE
25	DD	4	LEU
25	DD	12	THR
25	DD	18	ASP
25	DD	25	THR
25	DD	33	ARG

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Mol	Chain	Res	Type
25	DD	39	ASP
25	DD	64	GLU
25	DD	73	VAL
25	DD	84	LEU
25	DD	86	GLU
25	DD	89	GLU
25	DD	98	VAL
25	DD	99	GLU
25	DD	103	ASP
25	DD	138	LEU
25	DD	139	SER
25	DD	150	GLN
25	DD	170	VAL
25	DD	183	GLU
25	DD	189	VAL
26	DE	6	LYS
26	DE	25	GLU
26	DE	40	ARG
26	DE	69	ARG
26	DE	77	ILE
26	DE	83	VAL
26	DE	90	GLN
26	DE	96	VAL
26	DE	105	LEU
26	DE	107	SER
26	DE	108	ILE
26	DE	113	VAL
26	DE	114	ARG
26	DE	118	LEU
26	DE	126	VAL
26	DE	133	LEU
26	DE	145	ASP
26	DE	149	ILE
26	DE	159	LEU
26	DE	163	ASN
26	DE	164	LEU
26	DE	170	ARG
26	DE	173	THR
26	DE	187	VAL
26	DE	189	THR
26	DE	199	MET
27	DF	4	LEU

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Mol	Chain	Res	Type
27	DF	14	LYS
27	DF	21	ASN
27	DF	26	MET
27	DF	28	VAL
27	DF	35	THR
27	DF	36	LEU
27	DF	44	ILE
27	DF	46	ASP
27	DF	52	ASN
27	DF	64	LYS
27	DF	67	ILE
27	DF	74	VAL
27	DF	81	GLN
27	DF	89	VAL
27	DF	106	ILE
27	DF	110	ARG
27	DF	117	LEU
27	DF	125	ARG
27	DF	134	GLU
27	DF	149	VAL
27	DF	150	ARG
27	DF	152	LEU
27	DF	157	THR
27	DF	164	GLU
27	DF	174	ASP
28	DG	11	VAL
28	DG	17	VAL
28	DG	26	ILE
28	DG	29	LYS
28	DG	30	ASN
28	DG	33	LEU
28	DG	34	THR
28	DG	44	LYS
28	DG	45	HIS
28	DG	72	LEU
28	DG	89	LEU
28	DG	95	ARG
28	DG	98	VAL
28	DG	117	LEU
28	DG	124	GLU
28	DG	127	THR
28	DG	130	GLU

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Mol	Chain	Res	Type
28	DG	155	GLU
28	DG	166	ASP
28	DG	168	VAL
29	DH	7	ASP
29	DH	12	LEU
29	DH	41	LYS
29	DH	42	LYS
29	DH	48	GLU
29	DH	53	GLU
29	DH	54	LEU
29	DH	62	LEU
29	DH	77	THR
29	DH	78	VAL
29	DH	87	GLU
29	DH	89	LYS
29	DH	94	ILE
29	DH	103	VAL
29	DH	109	GLU
29	DH	114	GLU
29	DH	116	ARG
29	DH	117	LEU
29	DH	119	ASN
29	DH	121	VAL
29	DH	124	THR
29	DH	125	THR
29	DH	142	VAL
29	DH	146	VAL
29	DH	149	GLU
30	DI	3	LYS
30	DI	4	LYS
30	DI	8	TYR
30	DI	10	LYS
30	DI	11	LEU
30	DI	12	GLN
30	DI	17	MET
30	DI	24	VAL
30	DI	31	GLN
30	DI	40	LYS
30	DI	49	ILE
30	DI	55	ILE
30	DI	68	THR
30	DI	69	PHE

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Mol	Chain	Res	Type
30	DI	72	LYS
30	DI	79	LEU
30	DI	86	ILE
30	DI	92	LYS
30	DI	97	LYS
30	DI	102	SER
30	DI	105	GLN
30	DI	106	LEU
30	DI	117	MET
30	DI	122	ILE
30	DI	123	GLU
30	DI	125	MET
30	DI	126	THR
30	DI	127	ARG
30	DI	128	SER
30	DI	134	ARG
30	DI	136	MET
31	DJ	5	THR
31	DJ	17	VAL
31	DJ	30	THR
31	DJ	36	LEU
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	44	TYR
31	DJ	57	LEU
31	DJ	61	LYS
31	DJ	70	THR
31	DJ	76	HIS
31	DJ	81	ILE
31	DJ	85	LYS
31	DJ	86	GLN
31	DJ	103	ILE
31	DJ	109	LEU
31	DJ	118	MET
31	DJ	124	VAL
31	DJ	139	VAL
32	DK	1	MET
32	DK	49	ARG
32	DK	66	LYS
32	DK	67	LYS
32	DK	86	LEU
32	DK	95	ILE

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Mol	Chain	Res	Type
32	DK	104	THR
32	DK	118	LEU
32	DK	122	VAL
33	DL	2	ARG
33	DL	3	LEU
33	DL	23	ILE
33	DL	29	LYS
33	DL	48	ARG
33	DL	59	ARG
33	DL	77	ILE
33	DL	78	ARG
33	DL	82	LEU
33	DL	90	VAL
33	DL	94	THR
33	DL	100	ILE
33	DL	103	ILE
33	DL	118	THR
33	DL	120	VAL
33	DL	126	ARG
34	DM	60	GLN
34	DM	70	ASP
34	DM	74	THR
34	DM	75	GLU
34	DM	100	LYS
34	DM	108	VAL
34	DM	112	LEU
34	DM	124	LEU
34	DM	128	THR
35	DN	1	MET
35	DN	2	ARG
35	DN	14	SER
35	DN	15	SER
35	DN	18	GLN
35	DN	20	MET
35	DN	33	ILE
35	DN	48	VAL
35	DN	52	ILE
35	DN	53	THR
35	DN	63	ARG
35	DN	65	LEU
35	DN	70	THR
35	DN	71	ARG

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Mol	Chain	Res	Type
35	DN	75	ILE
35	DN	76	VAL
35	DN	90	ARG
35	DN	100	CYS
35	DN	114	GLU
35	DN	116	VAL
36	DO	9	ARG
36	DO	18	LEU
36	DO	24	THR
36	DO	26	LEU
36	DO	28	VAL
36	DO	31	THR
36	DO	36	TYR
36	DO	47	VAL
36	DO	48	LEU
36	DO	56	LYS
36	DO	74	VAL
36	DO	78	VAL
36	DO	88	LYS
36	DO	103	VAL
37	DP	4	ILE
37	DP	7	GLN
37	DP	32	VAL
37	DP	34	GLU
37	DP	36	SER
37	DP	37	LYS
37	DP	48	ILE
37	DP	66	ASN
37	DP	73	VAL
37	DP	80	VAL
37	DP	81	VAL
37	DP	83	SER
37	DP	89	ARG
37	DP	92	VAL
37	DP	94	LYS
37	DP	96	LYS
37	DP	109	ARG
37	DP	110	ILE
37	DP	114	LEU
38	DQ	5	LYS
38	DQ	8	VAL
38	DQ	9	ILE

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Mol	Chain	Res	Type
38	DQ	11	ARG
38	DQ	17	ILE
38	DQ	22	LYS
38	DQ	30	ARG
38	DQ	41	LYS
38	DQ	51	ARG
38	DQ	52	GLN
38	DQ	94	ILE
38	DQ	104	VAL
39	DR	38	VAL
39	DR	39	LEU
39	DR	40	MET
39	DR	41	ILE
39	DR	43	ASN
39	DR	46	GLU
39	DR	48	LYS
39	DR	49	ILE
39	DR	58	VAL
39	DR	75	VAL
39	DR	79	ARG
39	DR	85	LYS
39	DR	94	THR
39	DR	99	THR
40	DS	3	THR
40	DS	6	LYS
40	DS	19	LEU
40	DS	23	LEU
40	DS	24	ILE
40	DS	33	LEU
40	DS	39	THR
40	DS	41	LYS
40	DS	51	LEU
40	DS	53	SER
40	DS	67	ASP
40	DS	69	LEU
40	DS	74	ILE
40	DS	76	VAL
40	DS	86	MET
40	DS	96	ILE
40	DS	97	LEU
40	DS	107	VAL
41	DT	2	ILE

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Mol	Chain	Res	Type
41	DT	3	ARG
41	DT	7	LEU
41	DT	16	VAL
41	DT	22	THR
41	DT	24	MET
41	DT	26	LYS
41	DT	30	ILE
41	DT	31	VAL
41	DT	32	LEU
41	DT	44	LYS
41	DT	49	LYS
41	DT	69	ARG
41	DT	74	ILE
41	DT	77	ARG
42	DU	7	ARG
42	DU	10	GLU
42	DU	11	VAL
42	DU	15	THR
42	DU	18	ASP
42	DU	30	SER
42	DU	34	VAL
42	DU	35	ILE
42	DU	40	ASN
42	DU	41	LEU
42	DU	45	HIS
42	DU	46	GLN
42	DU	49	VAL
42	DU	54	GLN
42	DU	61	LYS
42	DU	72	ILE
42	DU	99	ASN
42	DU	102	THR
43	DV	1	MET
43	DV	3	THR
43	DV	8	VAL
43	DV	29	ILE
43	DV	35	GLU
43	DV	42	LEU
43	DV	49	ASN
43	DV	50	MET
43	DV	53	LYS
43	DV	61	LEU

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Mol	Chain	Res	Type
43	DV	63	ILE
43	DV	65	VAL
43	DV	92	VAL
44	DW	20	ARG
44	DW	30	SER
44	DW	38	VAL
44	DW	41	ARG
44	DW	72	LYS
45	DX	2	SER
45	DX	4	VAL
45	DX	11	ARG
45	DX	23	ASN
45	DX	25	THR
45	DX	26	LYS
45	DX	33	LEU
45	DX	37	ARG
45	DX	40	VAL
45	DX	46	PHE
45	DX	47	VAL
45	DX	52	SER
45	DX	58	VAL
45	DX	64	ILE
45	DX	71	LEU
45	DX	76	GLU
46	DY	2	LYS
46	DY	5	GLU
46	DY	6	LEU
46	DY	9	LYS
46	DY	11	VAL
46	DY	14	LEU
46	DY	16	THR
46	DY	21	LEU
46	DY	25	GLN
46	DY	37	LEU
46	DY	38	GLN
46	DY	45	GLN
46	DY	49	ASP
46	DY	56	LEU
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	4	THR
47	DZ	6	LYS

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Mol	Chain	Res	Type
47	DZ	8	THR
47	DZ	10	THR
47	DZ	21	LYS
47	DZ	25	LEU
47	DZ	30	ARG
47	DZ	31	ARG
47	DZ	36	VAL
47	DZ	39	GLU
47	DZ	41	THR
47	DZ	45	ARG
47	DZ	57	VAL
47	DZ	58	GLU
48	D0	28	LEU
48	D0	36	GLU
48	D0	37	LYS
48	D0	46	ASP
48	D0	52	ARG
49	D1	5	ILE
49	D1	12	VAL
49	D1	45	GLN
49	D1	46	HIS
49	D1	51	GLU
50	D2	4	THR
50	D2	10	LEU
50	D2	11	LYS
50	D2	24	THR
50	D2	41	ARG
50	D2	42	LEU
50	D2	44	VAL
50	D2	46	LYS
51	D3	6	THR
51	D3	23	LYS
51	D3	30	ARG
51	D3	31	HIS
51	D3	34	THR
51	D3	41	LYS
51	D3	47	LYS
52	D4	2	LYS
52	D4	3	VAL
52	D4	17	VAL
52	D4	26	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (101)

such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	39	HIS
4	AD	74	ASN
4	AD	89	ASN
4	AD	198	HIS
5	AE	73	ASN
5	AE	77	ASN
9	AI	5	GLN
10	AJ	99	GLN
11	AK	24	HIS
15	AO	38	HIS
15	AO	46	HIS
19	AS	52	HIS
20	AT	3	ASN
20	AT	13	GLN
20	AT	68	HIS
24	BC	53	HIS
24	BC	243	HIS
25	BD	49	GLN
25	BD	58	ASN
27	BF	5	HIS
27	BF	27	GLN
28	BG	128	GLN
29	BH	20	ASN
29	BH	119	ASN
29	BH	135	HIS
30	BI	94	ASN
31	BJ	86	GLN
31	BJ	136	GLN
34	BM	13	HIS
35	BN	31	HIS
35	BN	107	ASN
36	BO	19	GLN
36	BO	29	HIS
37	BP	56	HIS
38	BQ	72	ASN
39	BR	86	GLN
39	BR	89	HIS
40	BS	60	HIS
44	BW	46	HIS
45	BX	17	ASN
46	BY	39	GLN
46	BY	45	GLN

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Mol	Chain	Res	Type
48	B0	38	HIS
53	B5	67	HIS
2	CB	15	HIS
2	CB	51	ASN
2	CB	103	ASN
2	CB	177	ASN
3	CC	123	GLN
3	CC	176	HIS
4	CD	74	ASN
4	CD	198	HIS
5	CE	89	HIS
7	CG	130	ASN
7	CG	148	ASN
8	CH	18	GLN
10	CJ	70	HIS
13	CM	100	GLN
14	CN	49	GLN
15	CO	46	HIS
15	CO	50	HIS
16	CP	9	HIS
17	CQ	50	ASN
18	CR	52	GLN
19	CS	14	HIS
20	CT	52	ASN
20	CT	68	HIS
20	CT	82	GLN
24	DC	15	HIS
24	DC	25	HIS
24	DC	46	ASN
24	DC	90	ASN
25	DD	150	GLN
26	DE	115	GLN
26	DE	165	HIS
27	DF	37	ASN
29	DH	20	ASN
29	DH	28	ASN
30	DI	105	GLN
31	DJ	131	ASN
31	DJ	136	GLN
32	DK	3	GLN
33	DL	54	GLN
33	DL	104	GLN

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Mol	Chain	Res	Type
35	DN	3	HIS
36	DO	29	HIS
36	DO	104	GLN
37	DP	52	ASN
37	DP	66	ASN
40	DS	7	HIS
41	DT	15	HIS
41	DT	28	ASN
42	DU	53	ASN
42	DU	69	ASN
43	DV	24	ASN
44	DW	57	HIS
46	DY	41	HIS
48	D0	5	GLN
51	D3	24	HIS
51	D3	31	HIS
52	D4	13	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	322 (20%)	13 (0%)
1	CA	1538/1539 (99%)	312 (20%)	8 (0%)
22	BA	2895/2903 (99%)	516 (17%)	22 (0%)
22	DA	2895/2903 (99%)	635 (21%)	23 (0%)
23	BB	118/119 (99%)	18 (15%)	0
23	DB	117/119 (98%)	22 (18%)	0
All	All	9100/9122 (99%)	1825 (20%)	66 (0%)

All (1825) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	4	U
1	AA	5	U
1	AA	6	G
1	AA	9	G
1	AA	13	U
1	AA	22	G
1	AA	28	A
1	AA	32	A
1	AA	39	G

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Mol	Chain	Res	Type
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	75	G
1	AA	76	G
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	108	G
1	AA	110	C
1	AA	115	G
1	AA	116	A
1	AA	117	G
1	AA	121	U
1	AA	122	G
1	AA	130	A
1	AA	131	A
1	AA	136	C
1	AA	137	U
1	AA	141	G
1	AA	143	A
1	AA	144	G
1	AA	149	A
1	AA	158	G
1	AA	163	C
1	AA	168	G
1	AA	169	C

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Mol	Chain	Res	Type
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	188	C
1	AA	195	A
1	AA	197	A
1	AA	205	A
1	AA	209	U
1	AA	210	C
1	AA	226	G
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	289	G
1	AA	320	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	365	U
1	AA	367	U
1	AA	372	C
1	AA	384	G
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C

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Mol	Chain	Res	Type
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	453	G
1	AA	454	G
1	AA	457	G
1	AA	458	U
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	475	C
1	AA	479	U
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	492	C
1	AA	495	A
1	AA	498	A
1	AA	509	A
1	AA	511	C
1	AA	512	U
1	AA	518	C
1	AA	521	G
1	AA	527	G
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	545	C
1	AA	547	A
1	AA	562	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	596	A
1	AA	615	G
1	AA	650	G
1	AA	653	U
1	AA	661	G
1	AA	665	A

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Mol	Chain	Res	Type
1	AA	702	A
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	734	G
1	AA	746	A
1	AA	748	G
1	AA	755	G
1	AA	772	U
1	AA	773	G
1	AA	774	G
1	AA	777	A
1	AA	788	U
1	AA	793	U
1	AA	794	A
1	AA	802	A
1	AA	810	C
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	821	G
1	AA	825	A
1	AA	828	U
1	AA	832	G
1	AA	835	U
1	AA	836	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	849	G
1	AA	859	G
1	AA	867	G
1	AA	902	G
1	AA	910	C
1	AA	914	A
1	AA	922	G
1	AA	926	G
1	AA	927	G

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Mol	Chain	Res	Type
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	964	A
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	983	A
1	AA	987	G
1	AA	992	U
1	AA	993	G
1	AA	1002	G
1	AA	1003	G
1	AA	1004	A
1	AA	1008	U
1	AA	1009	U
1	AA	1015	G
1	AA	1016	A
1	AA	1019	A
1	AA	1022	A
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	A
1	AA	1037	C
1	AA	1042	A
1	AA	1043	G
1	AA	1044	A
1	AA	1047	G
1	AA	1049	U
1	AA	1050	G

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Mol	Chain	Res	Type
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1061	G
1	AA	1065	U
1	AA	1066	C
1	AA	1086	U
1	AA	1090	U
1	AA	1091	U
1	AA	1092	A
1	AA	1094	G
1	AA	1095	U
1	AA	1098	C
1	AA	1101	A
1	AA	1124	G
1	AA	1125	U
1	AA	1127	G
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1145	A
1	AA	1146	A
1	AA	1151	A
1	AA	1152	A
1	AA	1154	G
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1167	A
1	AA	1168	U
1	AA	1171	A
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A

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Mol	Chain	Res	Type
1	AA	1198	G
1	AA	1201	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1258	G
1	AA	1263	C
1	AA	1280	A
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C
1	AA	1298	U
1	AA	1300	G
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G
1	AA	1320	C
1	AA	1323	G
1	AA	1328	C
1	AA	1332	A
1	AA	1335	U
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1370	G
1	AA	1378	C
1	AA	1379	G
1	AA	1398	A
1	AA	1401	G

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Mol	Chain	Res	Type
1	AA	1408	A
1	AA	1441	A
1	AA	1442	G
1	AA	1443	C
1	AA	1446	A
1	AA	1450	U
1	AA	1452	C
1	AA	1455	G
1	AA	1493	A
1	AA	1497	G
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1534	A
1	AA	1535	C
1	AA	1538	C
22	BA	10	A
22	BA	13	A
22	BA	34	U
22	BA	39	G
22	BA	45	G
22	BA	46	G
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	102	U
22	BA	103	A
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	131	A
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	166	U

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Mol	Chain	Res	Type
22	BA	181	A
22	BA	196	A
22	BA	199	A
22	BA	200	U
22	BA	206	U
22	BA	207	A
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	245	G
22	BA	248	G
22	BA	255	A
22	BA	265	A
22	BA	266	G
22	BA	272	A
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	279	A
22	BA	302	C
22	BA	310	A
22	BA	311	A
22	BA	325	G
22	BA	329	G
22	BA	330	A
22	BA	331	C
22	BA	352	A
22	BA	353	C
22	BA	355	U
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	386	G
22	BA	396	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	420	C
22	BA	424	G
22	BA	443	A

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Mol	Chain	Res	Type
22	BA	455	C
22	BA	481	G
22	BA	491	G
22	BA	492	A
22	BA	497	A
22	BA	504	A
22	BA	505	A
22	BA	509	C
22	BA	510	C
22	BA	528	A
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	563	A
22	BA	573	U
22	BA	575	A
22	BA	586	A
22	BA	603	A
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	637	A
22	BA	645	C
22	BA	647	G
22	BA	648	G
22	BA	653	U
22	BA	654	A
22	BA	655	A
22	BA	686	U
22	BA	729	G
22	BA	730	A
22	BA	738	G
22	BA	747	U
22	BA	764	A

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Mol	Chain	Res	Type
22	BA	765	C
22	BA	775	G
22	BA	776	G
22	BA	781	A
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	789	A
22	BA	791	C
22	BA	792	A
22	BA	802	A
22	BA	805	G
22	BA	812	C
22	BA	819	A
22	BA	826	U
22	BA	827	U
22	BA	828	U
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	852	U
22	BA	858	G
22	BA	859	G
22	BA	866	A
22	BA	877	A
22	BA	878	A
22	BA	879	G
22	BA	885	C
22	BA	896	A
22	BA	900	A
22	BA	905	A
22	BA	907	G
22	BA	908	C
22	BA	909	A
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	927	A
22	BA	932	U
22	BA	941	A
22	BA	946	C
22	BA	961	C

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Mol	Chain	Res	Type
22	BA	974	G
22	BA	981	A
22	BA	982	C
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	995	C
22	BA	996	A
22	BA	999	U
22	BA	1012	U
22	BA	1013	C
22	BA	1022	G
22	BA	1024	G
22	BA	1026	G
22	BA	1027	A
22	BA	1033	U
22	BA	1046	A
22	BA	1047	G
22	BA	1054	A
22	BA	1057	A
22	BA	1058	U
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1066	U
22	BA	1067	A
22	BA	1068	G
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1077	A
22	BA	1078	U
22	BA	1079	C
22	BA	1081	U
22	BA	1088	A
22	BA	1089	A
22	BA	1092	C
22	BA	1097	U
22	BA	1098	A

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Mol	Chain	Res	Type
22	BA	1100	C
22	BA	1103	A
22	BA	1104	C
22	BA	1112	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1138	G
22	BA	1139	G
22	BA	1142	A
22	BA	1155	A
22	BA	1168	G
22	BA	1171	G
22	BA	1172	C
22	BA	1173	U
22	BA	1174	U
22	BA	1175	A
22	BA	1176	U
22	BA	1178	C
22	BA	1179	G
22	BA	1180	U
22	BA	1181	U
22	BA	1182	G
22	BA	1185	G
22	BA	1189	A
22	BA	1238	G
22	BA	1250	G
22	BA	1253	A
22	BA	1256	G
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1280	G
22	BA	1286	A
22	BA	1293	C
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1325	U

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Mol	Chain	Res	Type
22	BA	1345	C
22	BA	1352	U
22	BA	1359	A
22	BA	1365	A
22	BA	1368	G
22	BA	1379	U
22	BA	1383	A
22	BA	1384	A
22	BA	1386	C
22	BA	1406	U
22	BA	1407	G
22	BA	1415	U
22	BA	1416	G
22	BA	1419	A
22	BA	1427	A
22	BA	1428	C
22	BA	1435	G
22	BA	1450	G
22	BA	1452	G
22	BA	1453	A
22	BA	1461	C
22	BA	1482	G
22	BA	1493	C
22	BA	1495	A
22	BA	1504	A
22	BA	1508	A
22	BA	1510	G
22	BA	1515	A
22	BA	1523	U
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1554	U
22	BA	1555	G
22	BA	1560	G
22	BA	1569	A
22	BA	1578	U
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C

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Mol	Chain	Res	Type
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A
22	BA	1609	A
22	BA	1632	A
22	BA	1634	A
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1652	A
22	BA	1674	G
22	BA	1688	U
22	BA	1703	G
22	BA	1715	G
22	BA	1717	A
22	BA	1718	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1738	G
22	BA	1739	A
22	BA	1744	A
22	BA	1764	C
22	BA	1766	G
22	BA	1773	A
22	BA	1774	C
22	BA	1776	G
22	BA	1800	C
22	BA	1801	A
22	BA	1808	A
22	BA	1816	C
22	BA	1828	G
22	BA	1829	A
22	BA	1859	U
22	BA	1865	U
22	BA	1866	A
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G
22	BA	1885	A
22	BA	1890	A

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Mol	Chain	Res	Type
22	BA	1900	A
22	BA	1906	G
22	BA	1909	C
22	BA	1912	A
22	BA	1913	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1923	U
22	BA	1925	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1937	A
22	BA	1938	A
22	BA	1955	U
22	BA	1964	G
22	BA	1965	C
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1981	A
22	BA	1991	U
22	BA	1992	G
22	BA	1993	U
22	BA	1997	C
22	BA	2009	A
22	BA	2018	G
22	BA	2020	A
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2043	C
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A

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Mol	Chain	Res	Type
22	BA	2061	G
22	BA	2062	A
22	BA	2069	G
22	BA	2072	C
22	BA	2077	A
22	BA	2092	U
22	BA	2093	G
22	BA	2098	U
22	BA	2100	G
22	BA	2101	A
22	BA	2102	G
22	BA	2110	G
22	BA	2111	U
22	BA	2112	G
22	BA	2113	U
22	BA	2115	G
22	BA	2116	G
22	BA	2117	A
22	BA	2118	U
22	BA	2119	A
22	BA	2122	U
22	BA	2123	G
22	BA	2126	A
22	BA	2127	G
22	BA	2128	G
22	BA	2132	U
22	BA	2133	G
22	BA	2134	A
22	BA	2136	G
22	BA	2140	G
22	BA	2145	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2157	G
22	BA	2162	G
22	BA	2164	C
22	BA	2165	C
22	BA	2167	U
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A

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Mol	Chain	Res	Type
22	BA	2172	U
22	BA	2173	A
22	BA	2176	A
22	BA	2178	C
22	BA	2179	C
22	BA	2181	U
22	BA	2187	U
22	BA	2190	G
22	BA	2198	A
22	BA	2203	U
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2220	U
22	BA	2225	A
22	BA	2238	G
22	BA	2239	G
22	BA	2248	C
22	BA	2250	G
22	BA	2258	C
22	BA	2268	A
22	BA	2269	G
22	BA	2273	A
22	BA	2283	C
22	BA	2287	A
22	BA	2289	G
22	BA	2296	U
22	BA	2305	U
22	BA	2308	G
22	BA	2309	A
22	BA	2322	A
22	BA	2326	C
22	BA	2327	A
22	BA	2335	A
22	BA	2345	G
22	BA	2347	C
22	BA	2361	G
22	BA	2378	A
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2402	U

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Mol	Chain	Res	Type
22	BA	2403	C
22	BA	2406	A
22	BA	2424	C
22	BA	2425	A
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A
22	BA	2441	U
22	BA	2447	G
22	BA	2448	A
22	BA	2453	A
22	BA	2476	A
22	BA	2478	A
22	BA	2490	G
22	BA	2491	U
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2518	A
22	BA	2525	G
22	BA	2529	G
22	BA	2554	U
22	BA	2555	U
22	BA	2566	A
22	BA	2567	G
22	BA	2573	C
22	BA	2578	G
22	BA	2582	G
22	BA	2584	U
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2613	U
22	BA	2615	U
22	BA	2621	G
22	BA	2629	U
22	BA	2663	G
22	BA	2682	A
22	BA	2689	U

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Mol	Chain	Res	Type
22	BA	2690	U
22	BA	2726	A
22	BA	2729	G
22	BA	2744	G
22	BA	2748	A
22	BA	2757	A
22	BA	2765	A
22	BA	2778	A
22	BA	2791	G
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2811	G
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2836	U
22	BA	2840	C
22	BA	2858	C
22	BA	2867	G
22	BA	2873	A
22	BA	2874	C
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2885	G
22	BA	2886	A
22	BA	2887	A
22	BA	2891	U
22	BA	2901	C
22	BA	2903	U
23	BB	2	G
23	BB	9	G
23	BB	13	G
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	C
23	BB	37	C
23	BB	41	G
23	BB	44	G
23	BB	45	A

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Mol	Chain	Res	Type
23	BB	56	G
23	BB	66	A
23	BB	67	G
23	BB	84	G
23	BB	89	U
23	BB	109	A
23	BB	119	A
1	CA	5	U
1	CA	6	G
1	CA	9	G
1	CA	17	U
1	CA	19	A
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	56	U
1	CA	70	U
1	CA	71	A
1	CA	73	C
1	CA	74	A
1	CA	80	A
1	CA	83	C
1	CA	84	U
1	CA	85	U
1	CA	87	C
1	CA	88	U
1	CA	91	U
1	CA	93	U
1	CA	94	G
1	CA	95	C
1	CA	97	G
1	CA	108	G
1	CA	116	A
1	CA	117	G
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	124	C
1	CA	129	A

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Mol	Chain	Res	Type
1	CA	130	A
1	CA	131	A
1	CA	143	A
1	CA	144	G
1	CA	154	U
1	CA	155	A
1	CA	156	C
1	CA	169	C
1	CA	173	U
1	CA	182	A
1	CA	183	C
1	CA	195	A
1	CA	204	G
1	CA	207	C
1	CA	208	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	213	G
1	CA	240	G
1	CA	245	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	280	C
1	CA	289	G
1	CA	294	U
1	CA	298	A
1	CA	304	U
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	331	G
1	CA	332	G
1	CA	348	G
1	CA	351	G
1	CA	352	C
1	CA	354	G
1	CA	357	G

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Mol	Chain	Res	Type
1	CA	367	U
1	CA	372	C
1	CA	376	G
1	CA	378	G
1	CA	379	C
1	CA	384	G
1	CA	398	U
1	CA	399	G
1	CA	406	G
1	CA	412	A
1	CA	413	G
1	CA	418	C
1	CA	421	U
1	CA	422	C
1	CA	429	U
1	CA	430	A
1	CA	440	C
1	CA	441	A
1	CA	446	G
1	CA	459	A
1	CA	463	U
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	469	C
1	CA	478	A
1	CA	479	U
1	CA	481	G
1	CA	482	A
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	498	A
1	CA	505	G
1	CA	510	A
1	CA	511	C
1	CA	518	C
1	CA	519	C
1	CA	521	G
1	CA	527	G
1	CA	532	A
1	CA	533	A

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Mol	Chain	Res	Type
1	CA	536	C
1	CA	545	C
1	CA	547	A
1	CA	550	G
1	CA	559	A
1	CA	564	C
1	CA	568	G
1	CA	571	U
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	581	G
1	CA	596	A
1	CA	622	A
1	CA	628	G
1	CA	650	G
1	CA	653	U
1	CA	665	A
1	CA	687	A
1	CA	702	A
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	733	G
1	CA	747	A
1	CA	755	G
1	CA	758	C
1	CA	760	G
1	CA	777	A
1	CA	785	G
1	CA	787	A
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	809	G
1	CA	812	G
1	CA	814	A
1	CA	815	A
1	CA	817	C
1	CA	819	A
1	CA	821	G

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Mol	Chain	Res	Type
1	CA	828	U
1	CA	829	G
1	CA	832	G
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	859	G
1	CA	874	G
1	CA	880	C
1	CA	885	G
1	CA	902	G
1	CA	914	A
1	CA	919	A
1	CA	922	G
1	CA	926	G
1	CA	934	C
1	CA	960	U
1	CA	966	G
1	CA	967	C
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	983	A
1	CA	987	G
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	995	C
1	CA	1004	A
1	CA	1008	U
1	CA	1009	U
1	CA	1018	G
1	CA	1022	A
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C

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Mol	Chain	Res	Type
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1034	G
1	CA	1037	C
1	CA	1039	G
1	CA	1043	G
1	CA	1044	A
1	CA	1050	G
1	CA	1054	C
1	CA	1065	U
1	CA	1066	C
1	CA	1070	U
1	CA	1072	G
1	CA	1073	U
1	CA	1086	U
1	CA	1088	G
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1104	G
1	CA	1124	G
1	CA	1125	U
1	CA	1129	C
1	CA	1133	G
1	CA	1134	G
1	CA	1136	C
1	CA	1137	C
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1145	A
1	CA	1155	A
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1168	U
1	CA	1184	G

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Mol	Chain	Res	Type
1	CA	1186	G
1	CA	1196	A
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A
1	CA	1227	A
1	CA	1230	C
1	CA	1236	A
1	CA	1238	A
1	CA	1240	U
1	CA	1246	A
1	CA	1253	G
1	CA	1257	A
1	CA	1260	G
1	CA	1269	A
1	CA	1275	A
1	CA	1280	A
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1292	G
1	CA	1293	C
1	CA	1297	G
1	CA	1299	A
1	CA	1304	G
1	CA	1305	G
1	CA	1317	C
1	CA	1318	A
1	CA	1320	C
1	CA	1322	C
1	CA	1336	C
1	CA	1337	G
1	CA	1338	G
1	CA	1346	A
1	CA	1353	G
1	CA	1362	A
1	CA	1363	A
1	CA	1364	U
1	CA	1370	G
1	CA	1379	G
1	CA	1382	C
1	CA	1398	A

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Mol	Chain	Res	Type
1	CA	1418	A
1	CA	1429	A
1	CA	1440	U
1	CA	1441	A
1	CA	1442	G
1	CA	1446	A
1	CA	1448	C
1	CA	1452	C
1	CA	1454	G
1	CA	1455	G
1	CA	1475	G
1	CA	1492	A
1	CA	1493	A
1	CA	1497	G
1	CA	1499	A
1	CA	1505	G
1	CA	1506	U
1	CA	1507	A
1	CA	1509	C
1	CA	1517	G
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
1	CA	1535	C
1	CA	1536	C
22	DA	10	A
22	DA	15	G
22	DA	23	G
22	DA	34	U
22	DA	39	G
22	DA	42	A
22	DA	46	G
22	DA	47	C
22	DA	57	C
22	DA	58	G
22	DA	61	C
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	80	G
22	DA	81	G

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Mol	Chain	Res	Type
22	DA	82	U
22	DA	83	A
22	DA	84	A
22	DA	91	A
22	DA	96	C
22	DA	98	G
22	DA	101	A
22	DA	102	U
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	145	C
22	DA	146	A
22	DA	149	A
22	DA	150	U
22	DA	155	A
22	DA	162	U
22	DA	163	C
22	DA	166	U
22	DA	181	A
22	DA	196	A
22	DA	199	A
22	DA	206	U
22	DA	215	G
22	DA	216	A
22	DA	222	A
22	DA	223	A
22	DA	225	C
22	DA	229	C
22	DA	233	A
22	DA	245	G
22	DA	248	G
22	DA	249	C
22	DA	253	C
22	DA	255	A
22	DA	256	A

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Mol	Chain	Res	Type
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	276	U
22	DA	279	A
22	DA	281	C
22	DA	282	A
22	DA	284	U
22	DA	285	G
22	DA	294	A
22	DA	299	A
22	DA	311	A
22	DA	322	A
22	DA	329	G
22	DA	330	A
22	DA	331	C
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	371	A
22	DA	372	G
22	DA	374	A
22	DA	380	G
22	DA	383	C
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	392	U
22	DA	396	G
22	DA	405	U
22	DA	411	G
22	DA	412	A
22	DA	417	C
22	DA	424	G
22	DA	426	C
22	DA	430	A
22	DA	432	A
22	DA	435	C
22	DA	448	U
22	DA	451	U
22	DA	452	G

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Mol	Chain	Res	Type
22	DA	455	C
22	DA	478	A
22	DA	479	A
22	DA	480	A
22	DA	481	G
22	DA	490	C
22	DA	491	G
22	DA	504	A
22	DA	505	A
22	DA	508	A
22	DA	510	C
22	DA	528	A
22	DA	529	A
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	543	G
22	DA	544	C
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	563	A
22	DA	569	U
22	DA	573	U
22	DA	575	A
22	DA	586	A
22	DA	588	U
22	DA	603	A
22	DA	613	A
22	DA	614	A
22	DA	627	A
22	DA	630	G
22	DA	631	A
22	DA	637	A
22	DA	645	C
22	DA	646	U
22	DA	647	G
22	DA	648	G
22	DA	651	G
22	DA	654	A

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Mol	Chain	Res	Type
22	DA	655	A
22	DA	662	G
22	DA	672	C
22	DA	685	A
22	DA	686	U
22	DA	695	G
22	DA	701	G
22	DA	702	U
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	740	C
22	DA	747	U
22	DA	748	G
22	DA	751	A
22	DA	752	A
22	DA	757	G
22	DA	758	C
22	DA	764	A
22	DA	771	G
22	DA	775	G
22	DA	776	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	798	G
22	DA	802	A
22	DA	805	G
22	DA	812	C
22	DA	819	A
22	DA	827	U
22	DA	828	U
22	DA	830	G
22	DA	844	A
22	DA	845	A
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G

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Mol	Chain	Res	Type
22	DA	865	C
22	DA	878	A
22	DA	881	G
22	DA	882	G
22	DA	885	C
22	DA	896	A
22	DA	897	C
22	DA	902	C
22	DA	910	A
22	DA	913	U
22	DA	914	G
22	DA	915	C
22	DA	931	U
22	DA	932	U
22	DA	941	A
22	DA	946	C
22	DA	953	G
22	DA	958	U
22	DA	961	C
22	DA	963	U
22	DA	974	G
22	DA	983	A
22	DA	985	C
22	DA	995	C
22	DA	996	A
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1025	G
22	DA	1026	G
22	DA	1033	U
22	DA	1041	G
22	DA	1046	A
22	DA	1047	G
22	DA	1048	A
22	DA	1053	C
22	DA	1058	U
22	DA	1060	U
22	DA	1061	U
22	DA	1062	G
22	DA	1065	U
22	DA	1066	U

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Mol	Chain	Res	Type
22	DA	1068	G
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1074	G
22	DA	1077	A
22	DA	1079	C
22	DA	1082	U
22	DA	1088	A
22	DA	1089	A
22	DA	1092	C
22	DA	1094	U
22	DA	1097	U
22	DA	1098	A
22	DA	1100	C
22	DA	1101	U
22	DA	1104	C
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1115	G
22	DA	1116	G
22	DA	1119	U
22	DA	1122	G
22	DA	1128	G
22	DA	1132	U
22	DA	1133	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1156	A
22	DA	1171	G
22	DA	1172	C
22	DA	1175	A
22	DA	1176	U
22	DA	1179	G
22	DA	1180	U
22	DA	1186	G
22	DA	1187	G

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Mol	Chain	Res	Type
22	DA	1195	G
22	DA	1204	A
22	DA	1211	C
22	DA	1212	G
22	DA	1221	C
22	DA	1227	G
22	DA	1230	A
22	DA	1231	U
22	DA	1236	G
22	DA	1238	G
22	DA	1246	A
22	DA	1250	G
22	DA	1253	A
22	DA	1254	A
22	DA	1255	U
22	DA	1256	G
22	DA	1258	U
22	DA	1264	A
22	DA	1266	G
22	DA	1271	G
22	DA	1272	A
22	DA	1273	U
22	DA	1276	A
22	DA	1288	G
22	DA	1300	G
22	DA	1301	A
22	DA	1318	U
22	DA	1321	A
22	DA	1345	C
22	DA	1352	U
22	DA	1355	G
22	DA	1359	A
22	DA	1365	A
22	DA	1368	G
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1384	A
22	DA	1386	C
22	DA	1387	A

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Mol	Chain	Res	Type
22	DA	1391	U
22	DA	1393	A
22	DA	1395	A
22	DA	1411	U
22	DA	1416	G
22	DA	1419	A
22	DA	1423	G
22	DA	1426	G
22	DA	1428	C
22	DA	1434	A
22	DA	1452	G
22	DA	1456	G
22	DA	1458	U
22	DA	1462	C
22	DA	1471	G
22	DA	1478	G
22	DA	1482	G
22	DA	1493	C
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1511	G
22	DA	1515	A
22	DA	1523	U
22	DA	1527	G
22	DA	1530	G
22	DA	1531	C
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1538	G
22	DA	1540	G
22	DA	1542	U
22	DA	1560	G
22	DA	1564	C
22	DA	1566	A
22	DA	1569	A
22	DA	1576	U
22	DA	1578	U
22	DA	1581	G

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Mol	Chain	Res	Type
22	DA	1582	C
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1587	G
22	DA	1591	A
22	DA	1599	U
22	DA	1603	A
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1611	C
22	DA	1613	G
22	DA	1616	A
22	DA	1619	G
22	DA	1623	G
22	DA	1625	C
22	DA	1626	A
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1651	G
22	DA	1660	G
22	DA	1663	G
22	DA	1664	A
22	DA	1674	G
22	DA	1690	A
22	DA	1694	C
22	DA	1695	G
22	DA	1715	G
22	DA	1728	C
22	DA	1729	U
22	DA	1730	C
22	DA	1732	C
22	DA	1733	G
22	DA	1738	G
22	DA	1740	G
22	DA	1744	A
22	DA	1750	G
22	DA	1756	G

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Mol	Chain	Res	Type
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1791	A
22	DA	1800	C
22	DA	1808	A
22	DA	1811	G
22	DA	1816	C
22	DA	1822	C
22	DA	1829	A
22	DA	1833	C
22	DA	1848	A
22	DA	1858	A
22	DA	1869	G
22	DA	1870	C
22	DA	1871	A
22	DA	1872	A
22	DA	1873	G
22	DA	1874	C
22	DA	1876	A
22	DA	1880	U
22	DA	1889	A
22	DA	1903	G
22	DA	1906	G
22	DA	1913	A
22	DA	1914	C
22	DA	1920	C
22	DA	1924	C
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1934	C
22	DA	1937	A
22	DA	1938	A
22	DA	1945	G
22	DA	1955	U
22	DA	1965	C
22	DA	1966	A
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G

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Mol	Chain	Res	Type
22	DA	1991	U
22	DA	1993	U
22	DA	1997	C
22	DA	2004	G
22	DA	2009	A
22	DA	2018	G
22	DA	2020	A
22	DA	2022	U
22	DA	2023	C
22	DA	2030	A
22	DA	2031	A
22	DA	2033	A
22	DA	2043	C
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2069	G
22	DA	2080	A
22	DA	2083	G
22	DA	2092	U
22	DA	2093	G
22	DA	2095	A
22	DA	2108	A
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G
22	DA	2113	U
22	DA	2115	G
22	DA	2116	G
22	DA	2117	A
22	DA	2118	U
22	DA	2119	A
22	DA	2125	G
22	DA	2126	A
22	DA	2127	G
22	DA	2128	G
22	DA	2131	U
22	DA	2132	U
22	DA	2133	G
22	DA	2135	A

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Mol	Chain	Res	Type
22	DA	2137	U
22	DA	2146	C
22	DA	2147	A
22	DA	2149	U
22	DA	2158	A
22	DA	2162	G
22	DA	2163	A
22	DA	2164	C
22	DA	2165	C
22	DA	2166	U
22	DA	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2173	A
22	DA	2178	C
22	DA	2179	C
22	DA	2184	A
22	DA	2189	U
22	DA	2190	G
22	DA	2194	U
22	DA	2198	A
22	DA	2203	U
22	DA	2204	G
22	DA	2212	A
22	DA	2214	C
22	DA	2225	A
22	DA	2226	C
22	DA	2230	G
22	DA	2238	G
22	DA	2241	A
22	DA	2243	U
22	DA	2246	G
22	DA	2250	G
22	DA	2268	A
22	DA	2273	A
22	DA	2278	A
22	DA	2280	G
22	DA	2283	C
22	DA	2287	A
22	DA	2293	G
22	DA	2305	U

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Mol	Chain	Res	Type
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	2312	U
22	DA	2316	G
22	DA	2321	U
22	DA	2322	A
22	DA	2324	U
22	DA	2325	G
22	DA	2327	A
22	DA	2333	A
22	DA	2344	U
22	DA	2347	C
22	DA	2350	C
22	DA	2354	C
22	DA	2357	G
22	DA	2361	G
22	DA	2383	G
22	DA	2385	C
22	DA	2402	U
22	DA	2403	C
22	DA	2406	A
22	DA	2407	A
22	DA	2410	G
22	DA	2422	C
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2428	G
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2440	C
22	DA	2441	U
22	DA	2446	G
22	DA	2447	G
22	DA	2448	A
22	DA	2449	U
22	DA	2457	U

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Mol	Chain	Res	Type
22	DA	2470	G
22	DA	2474	U
22	DA	2476	A
22	DA	2484	G
22	DA	2491	U
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G
22	DA	2518	A
22	DA	2525	G
22	DA	2529	G
22	DA	2535	G
22	DA	2547	A
22	DA	2550	G
22	DA	2554	U
22	DA	2566	A
22	DA	2567	G
22	DA	2572	A
22	DA	2573	C
22	DA	2578	G
22	DA	2579	C
22	DA	2581	G
22	DA	2582	G
22	DA	2585	U
22	DA	2586	U
22	DA	2602	A
22	DA	2603	G
22	DA	2609	U
22	DA	2610	C
22	DA	2613	U
22	DA	2629	U
22	DA	2630	G
22	DA	2646	C
22	DA	2663	G
22	DA	2682	A
22	DA	2689	U
22	DA	2690	U
22	DA	2714	G
22	DA	2716	C
22	DA	2726	A
22	DA	2727	A

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Mol	Chain	Res	Type
22	DA	2733	A
22	DA	2748	A
22	DA	2751	G
22	DA	2757	A
22	DA	2765	A
22	DA	2776	A
22	DA	2778	A
22	DA	2781	A
22	DA	2782	G
22	DA	2791	G
22	DA	2794	C
22	DA	2798	U
22	DA	2799	A
22	DA	2803	G
22	DA	2807	U
22	DA	2809	A
22	DA	2812	G
22	DA	2820	A
22	DA	2823	A
22	DA	2826	A
22	DA	2834	G
22	DA	2861	U
22	DA	2867	G
22	DA	2873	A
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2886	A
22	DA	2891	U
22	DA	2903	U
23	DB	13	G
23	DB	15	A
23	DB	22	U
23	DB	24	G
23	DB	31	C
23	DB	35	C
23	DB	36	C
23	DB	44	G
23	DB	51	G
23	DB	56	G
23	DB	64	G
23	DB	66	A

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Mol	Chain	Res	Type
23	DB	73	A
23	DB	88	C
23	DB	89	U
23	DB	90	C
23	DB	91	C
23	DB	98	G
23	DB	99	A
23	DB	105	G
23	DB	109	A
23	DB	110	C

All (66) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	115	G
1	AA	209	U
1	AA	351	G
1	AA	429	U
1	AA	575	G
1	AA	793	U
1	AA	1031	C
1	AA	1049	U
1	AA	1145	A
1	AA	1201	A
1	AA	1211	U
1	AA	1378	C
1	AA	1533	C
22	BA	70	G
22	BA	199	A
22	BA	271	G
22	BA	404	A
22	BA	764	A
22	BA	784	G
22	BA	846	U
22	BA	984	A
22	BA	995	C
22	BA	1078	U
22	BA	1180	U
22	BA	1344	U
22	BA	1378	A
22	BA	1606	C
22	BA	1610	A

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Mol	Chain	Res	Type
22	BA	2127	G
22	BA	2211	A
22	BA	2282	G
22	BA	2326	C
22	BA	2406	A
22	BA	2756	U
22	BA	2873	A
1	CA	96	U
1	CA	115	G
1	CA	209	U
1	CA	429	U
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
1	CA	1279	G
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	613	A
22	DA	846	U
22	DA	982	C
22	DA	1275	A
22	DA	1344	U
22	DA	1378	A
22	DA	1606	C
22	DA	1847	A
22	DA	2109	U
22	DA	2127	G
22	DA	2146	C
22	DA	2162	G
22	DA	2211	A
22	DA	2225	A
22	DA	2286	G
22	DA	2308	G
22	DA	2326	C
22	DA	2602	A
22	DA	2756	U
22	DA	2873	A

5.4 Non-standard residues in protein, DNA, RNA chains (i)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 502 ligands modelled in this entry, 500 are monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
55	VIR	BA	3001	-	38,40,40	3.98	16 (42%)	42,55,55	3.57	22 (52%)
55	VIR	DA	3001	-	38,40,40	3.92	16 (42%)	42,55,55	3.22	18 (42%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
55	VIR	BA	3001	-	-	11/48/58/58	0/2/3/3
55	VIR	DA	3001	-	-	13/48/58/58	0/2/3/3

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BA	3001	VIR	C28-C29	10.26	1.55	1.32
55	DA	3001	VIR	C28-C29	9.95	1.54	1.32
55	BA	3001	VIR	C12-C8	9.40	1.44	1.34
55	BA	3001	VIR	C22-C23	8.79	1.56	1.32
55	DA	3001	VIR	C22-C23	8.58	1.55	1.32
55	DA	3001	VIR	C12-C8	8.44	1.43	1.34
55	BA	3001	VIR	C19-C20	7.90	1.55	1.34
55	DA	3001	VIR	C19-C20	7.44	1.54	1.34
55	DA	3001	VIR	C26-N25	7.27	1.49	1.34
55	BA	3001	VIR	C26-N25	7.14	1.49	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DA	3001	VIR	C10-N9	6.54	1.36	1.29
55	DA	3001	VIR	C13-C10	6.44	1.58	1.50
55	BA	3001	VIR	C10-N9	6.02	1.35	1.29
55	DA	3001	VIR	C1-N5	6.00	1.47	1.39
55	BA	3001	VIR	C13-C10	5.62	1.57	1.50
55	BA	3001	VIR	C1-N5	5.57	1.47	1.39
55	DA	3001	VIR	O36-C37	5.22	1.45	1.34
55	DA	3001	VIR	C2-C1	5.00	1.52	1.35
55	BA	3001	VIR	O36-C37	4.64	1.44	1.34
55	BA	3001	VIR	C2-C1	4.57	1.50	1.35
55	BA	3001	VIR	C8-C6	4.25	1.56	1.49
55	BA	3001	VIR	C4-N5	-3.38	1.42	1.47
55	DA	3001	VIR	C4-N5	-3.31	1.42	1.47
55	DA	3001	VIR	C8-C6	3.25	1.54	1.49
55	DA	3001	VIR	C1-C37	2.77	1.56	1.48
55	DA	3001	VIR	C28-C26	2.51	1.53	1.48
55	BA	3001	VIR	C28-C26	2.48	1.53	1.48
55	DA	3001	VIR	C16-C14	2.35	1.54	1.51
55	BA	3001	VIR	C16-C14	2.14	1.54	1.51
55	BA	3001	VIR	C1-C37	2.13	1.54	1.48
55	DA	3001	VIR	C6-N5	2.07	1.43	1.38
55	BA	3001	VIR	C22-C20	2.06	1.50	1.46

All (40) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	DA	3001	VIR	C23-C22-C20	-9.51	111.52	125.89
55	BA	3001	VIR	C23-C22-C20	-8.91	112.42	125.89
55	BA	3001	VIR	C37-C1-N5	-7.73	113.59	123.34
55	BA	3001	VIR	C29-C28-C26	-7.60	104.80	122.67
55	BA	3001	VIR	O11-C10-C13	7.31	124.46	117.70
55	DA	3001	VIR	C37-C1-N5	-7.18	114.29	123.34
55	DA	3001	VIR	C21-C20-C22	-6.62	107.97	118.09
55	BA	3001	VIR	O36-C37-C1	6.43	119.90	110.77
55	DA	3001	VIR	O36-C37-C1	6.18	119.54	110.77
55	DA	3001	VIR	C30-C29-C28	-5.83	110.89	126.30
55	BA	3001	VIR	C30-C29-C28	-5.54	111.64	126.30
55	DA	3001	VIR	C29-C28-C26	-5.42	109.92	122.67
55	BA	3001	VIR	C21-C20-C19	-5.21	108.47	123.21
55	DA	3001	VIR	O11-C10-C13	5.08	122.39	117.70
55	BA	3001	VIR	C21-C20-C22	-4.97	110.50	118.09
55	BA	3001	VIR	C12-C8-N9	-4.68	105.66	109.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	DA	3001	VIR	C21-C20-C19	-4.30	111.03	123.21
55	BA	3001	VIR	C28-C26-N25	4.30	124.49	115.07
55	DA	3001	VIR	O11-C10-N9	-4.14	109.61	114.09
55	BA	3001	VIR	C24-N25-C26	-3.71	116.16	122.17
55	DA	3001	VIR	C22-C20-C19	-3.64	109.06	118.82
55	BA	3001	VIR	O11-C10-N9	-3.37	110.45	114.09
55	BA	3001	VIR	C32-O36-C37	-3.35	111.33	117.72
55	BA	3001	VIR	O36-C37-O38	-3.13	117.56	123.40
55	DA	3001	VIR	C6-C8-N9	2.86	128.71	123.70
55	BA	3001	VIR	C31-C30-C32	-2.85	106.10	111.11
55	DA	3001	VIR	C30-C32-C33	-2.85	108.98	115.98
55	BA	3001	VIR	O7-C6-C8	2.81	123.02	118.65
55	DA	3001	VIR	O11-C12-C8	-2.80	106.05	108.12
55	BA	3001	VIR	O27-C26-C28	-2.76	116.60	122.95
55	BA	3001	VIR	C22-C20-C19	-2.58	111.89	118.82
55	DA	3001	VIR	O7-C6-C8	2.42	122.40	118.65
55	DA	3001	VIR	C12-C8-N9	-2.34	107.41	109.15
55	BA	3001	VIR	C6-C8-N9	2.31	127.75	123.70
55	DA	3001	VIR	O36-C37-O38	-2.30	119.12	123.40
55	BA	3001	VIR	C31-C30-C29	-2.18	104.97	109.91
55	BA	3001	VIR	O27-C26-N25	-2.18	118.87	122.29
55	BA	3001	VIR	C30-C32-C33	-2.16	110.66	115.98
55	DA	3001	VIR	C28-C26-N25	2.03	119.52	115.07
55	DA	3001	VIR	C12-C8-C6	-2.01	123.81	127.60

There are no chirality outliers.

All (24) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
55	BA	3001	VIR	C2-C1-C37-O36
55	BA	3001	VIR	C17-C19-C20-C21
55	BA	3001	VIR	C20-C22-C23-C24
55	DA	3001	VIR	C17-C19-C20-C21
55	DA	3001	VIR	C17-C19-C20-C22
55	DA	3001	VIR	C19-C20-C22-C23
55	DA	3001	VIR	C21-C20-C22-C23
55	DA	3001	VIR	O36-C32-C33-C34
55	DA	3001	VIR	O36-C32-C33-C35
55	BA	3001	VIR	C21-C20-C22-C23
55	BA	3001	VIR	C2-C1-C37-O38
55	DA	3001	VIR	C2-C1-C37-O36
55	DA	3001	VIR	C28-C29-C30-C31

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Mol	Chain	Res	Type	Atoms
55	BA	3001	VIR	N25-C26-C28-C29
55	BA	3001	VIR	N5-C1-C37-O36
55	DA	3001	VIR	C30-C32-C33-C35
55	BA	3001	VIR	C31-C30-C32-O36
55	DA	3001	VIR	C28-C29-C30-C32
55	DA	3001	VIR	C30-C32-C33-C34
55	BA	3001	VIR	O27-C26-C28-C29
55	DA	3001	VIR	C22-C23-C24-N25
55	BA	3001	VIR	C28-C29-C30-C31
55	DA	3001	VIR	C2-C1-C37-O38
55	BA	3001	VIR	N9-C10-C13-C14

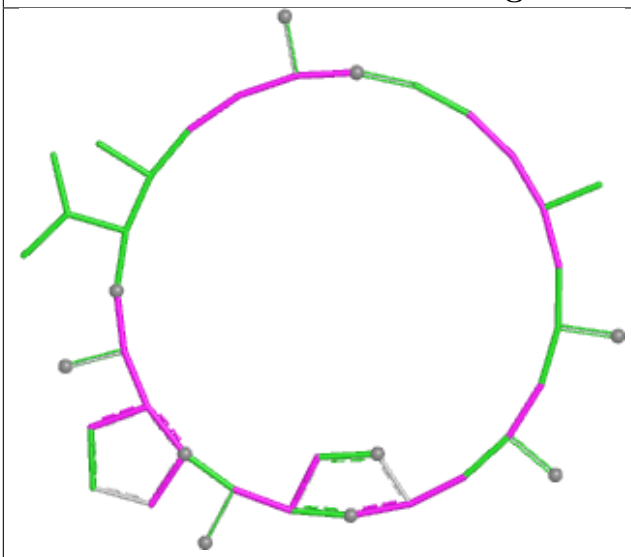
There are no ring outliers.

2 monomers are involved in 20 short contacts:

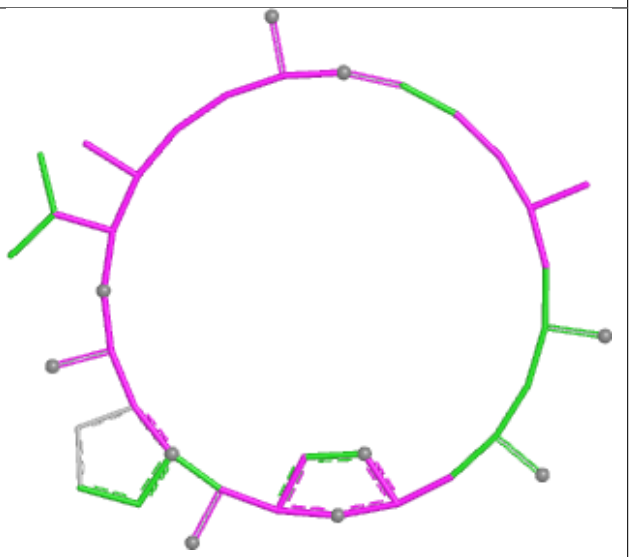
Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	BA	3001	VIR	5	0
55	DA	3001	VIR	15	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

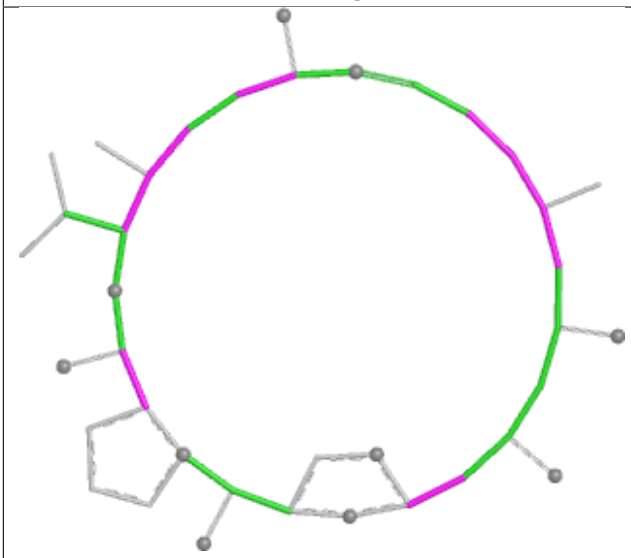
Ligand VIR BA 3001



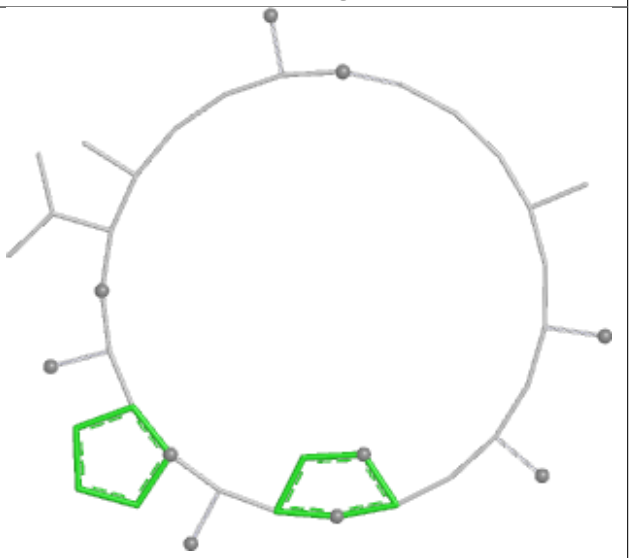
Bond lengths



Bond angles

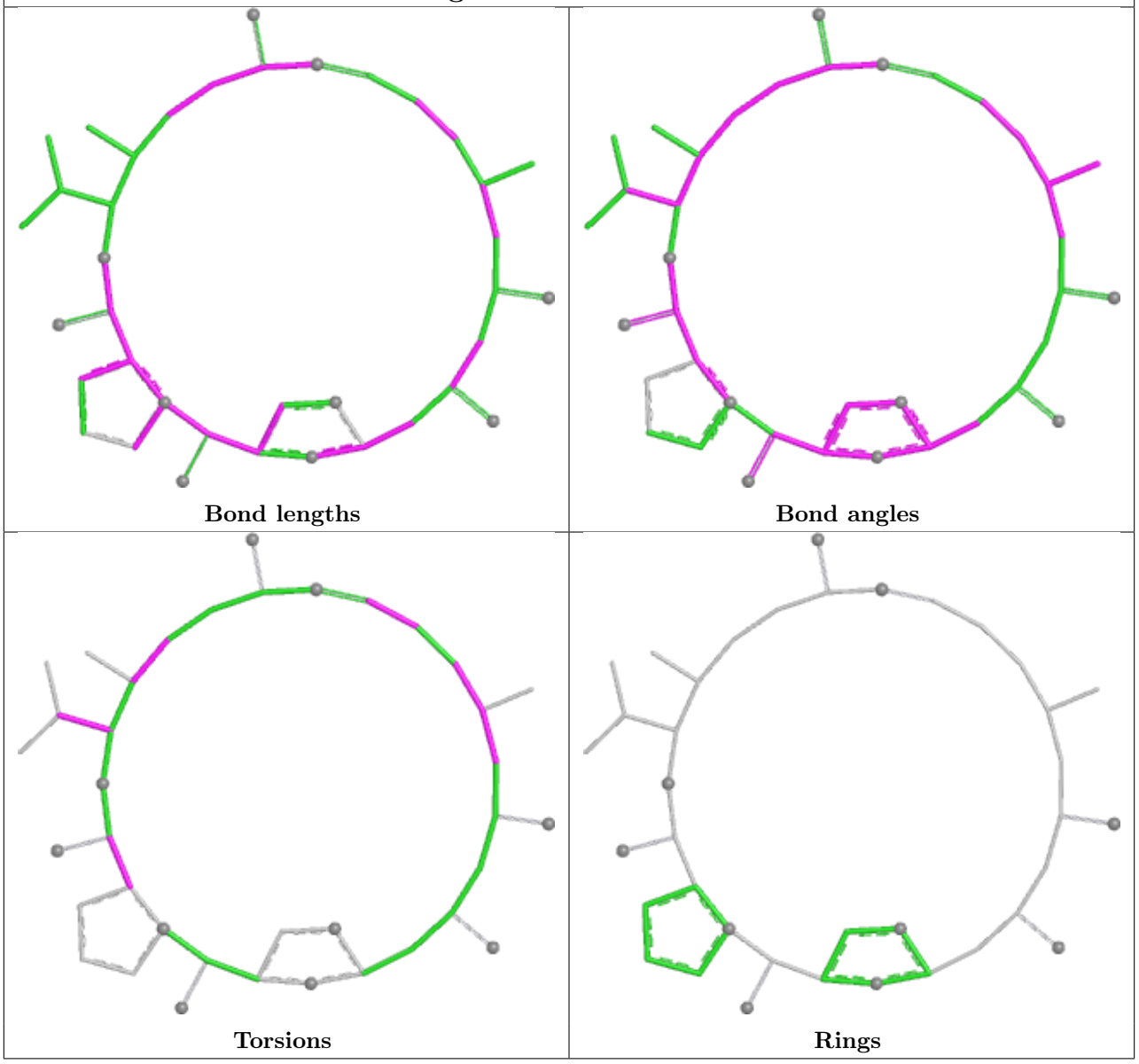


Torsions



Rings

Ligand VIR DA 3001



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1538/1539 (99%)	0.05	40 (2%) 57 48	12, 51, 134, 181	0
1	CA	1539/1539 (100%)	0.49	91 (5%) 28 22	25, 70, 145, 177	0
2	AB	218/218 (100%)	0.74	19 (8%) 16 13	38, 75, 100, 123	0
2	CB	218/218 (100%)	1.23	45 (20%) 2 2	61, 87, 107, 126	0
3	AC	206/206 (100%)	0.40	7 (3%) 48 39	35, 57, 78, 93	0
3	CC	206/206 (100%)	0.88	20 (9%) 13 11	51, 80, 95, 105	0
4	AD	205/205 (100%)	0.63	12 (5%) 28 22	33, 56, 78, 104	0
4	CD	205/205 (100%)	0.37	14 (6%) 23 18	17, 38, 63, 87	0
5	AE	150/150 (100%)	0.54	8 (5%) 32 25	32, 48, 79, 101	0
5	CE	150/150 (100%)	0.79	14 (9%) 14 12	30, 56, 82, 103	0
6	AF	100/100 (100%)	0.50	5 (5%) 34 27	34, 57, 73, 87	0
6	CF	100/100 (100%)	0.75	11 (11%) 10 9	45, 74, 94, 105	0
7	AG	151/151 (100%)	1.00	22 (14%) 6 4	54, 77, 96, 102	0
7	CG	151/151 (100%)	1.85	58 (38%) 1 0	82, 101, 110, 115	0
8	AH	129/129 (100%)	0.28	4 (3%) 51 42	31, 49, 66, 75	0
8	CH	129/129 (100%)	0.76	9 (6%) 22 18	50, 65, 81, 92	0
9	AI	127/127 (100%)	1.11	19 (14%) 5 4	44, 74, 96, 110	0
9	CI	127/127 (100%)	1.79	51 (40%) 0 0	73, 94, 111, 122	0
10	AJ	98/98 (100%)	1.04	14 (14%) 6 5	39, 66, 92, 122	0
10	CJ	98/98 (100%)	2.00	40 (40%) 0 0	71, 95, 111, 126	0
11	AK	117/117 (100%)	0.70	7 (5%) 27 21	26, 65, 92, 117	0
11	CK	117/117 (100%)	0.52	3 (2%) 57 48	38, 67, 80, 92	0
12	AL	123/123 (100%)	0.33	7 (5%) 29 23	21, 35, 64, 98	0
12	CL	123/123 (100%)	0.89	19 (15%) 5 4	36, 52, 78, 99	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AM	114/114 (100%)	0.83	12 (10%) 11 10	48, 69, 94, 103	0
13	CM	114/114 (100%)	2.34	68 (59%) 0 0	97, 109, 118, 119	0
14	AN	96/100 (96%)	1.02	15 (15%) 5 4	41, 61, 94, 103	0
14	CN	96/100 (96%)	1.89	39 (40%) 0 0	70, 95, 113, 120	0
15	AO	88/88 (100%)	0.57	5 (5%) 29 23	28, 51, 65, 89	0
15	CO	88/88 (100%)	0.56	1 (1%) 78 71	40, 63, 81, 98	0
16	AP	82/82 (100%)	0.74	8 (9%) 13 11	33, 47, 85, 101	0
16	CP	82/82 (100%)	1.12	11 (13%) 7 5	44, 61, 89, 106	0
17	AQ	80/80 (100%)	0.71	7 (8%) 15 13	28, 52, 77, 122	0
17	CQ	80/80 (100%)	1.43	24 (30%) 1 1	44, 76, 98, 103	0
18	AR	55/55 (100%)	0.52	3 (5%) 30 24	39, 52, 79, 108	0
18	CR	55/55 (100%)	0.60	2 (3%) 46 38	39, 55, 79, 111	0
19	AS	79/79 (100%)	0.88	8 (10%) 12 10	54, 69, 89, 101	0
19	CS	79/79 (100%)	2.46	56 (70%) 0 0	90, 110, 119, 125	0
20	AT	85/85 (100%)	0.78	9 (10%) 11 9	35, 48, 71, 101	0
20	CT	85/85 (100%)	1.25	16 (18%) 3 3	55, 74, 92, 99	0
21	AU	51/51 (100%)	1.57	12 (23%) 2 2	46, 75, 97, 106	0
21	CU	51/51 (100%)	1.76	15 (29%) 1 1	45, 72, 97, 105	0
22	BA	2897/2903 (99%)	-0.38	139 (4%) 35 28	1, 15, 131, 195	0
22	DA	2897/2903 (99%)	0.86	185 (6%) 25 20	40, 82, 146, 181	0
23	BB	119/119 (100%)	-0.57	0 100 100	3, 25, 52, 85	0
23	DB	118/119 (99%)	0.73	4 (3%) 48 39	67, 112, 133, 144	0
24	BC	271/271 (100%)	-0.09	6 (2%) 62 53	5, 21, 36, 54	0
24	DC	271/271 (100%)	1.16	52 (19%) 3 2	43, 62, 77, 90	0
25	BD	209/209 (100%)	-0.31	0 100 100	1, 11, 35, 68	0
25	DD	209/209 (100%)	1.21	40 (19%) 3 2	49, 68, 84, 96	0
26	BE	201/201 (100%)	-0.20	1 (0%) 87 83	1, 23, 53, 91	0
26	DE	201/201 (100%)	1.59	66 (32%) 1 1	46, 85, 102, 109	0
27	BF	177/177 (100%)	0.42	4 (2%) 61 52	24, 43, 77, 90	0
27	DF	177/177 (100%)	1.43	43 (24%) 2 1	91, 108, 120, 126	0
28	BG	176/176 (100%)	0.01	3 (1%) 69 61	17, 38, 62, 83	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	DG	176/176 (100%)	1.41	40 (22%) 2 2	72, 94, 106, 116	0
29	BH	149/149 (100%)	2.48	90 (60%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	2.53	100 (67%) 0 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	2.63	90 (63%) 0 0	90, 112, 122, 133	0
30	DI	141/141 (100%)	2.61	93 (65%) 0 0	102, 119, 129, 132	0
31	BJ	142/142 (100%)	-0.35	2 (1%) 73 65	2, 7, 21, 37	0
31	DJ	142/142 (100%)	0.89	18 (12%) 8 6	50, 66, 79, 94	0
32	BK	122/122 (100%)	-0.30	1 (0%) 82 77	4, 13, 32, 69	0
32	DK	122/122 (100%)	0.99	15 (12%) 8 7	47, 64, 83, 97	0
33	BL	143/143 (100%)	-0.06	0 100 100	1, 18, 44, 73	0
33	DL	143/143 (100%)	1.69	45 (31%) 1 1	46, 80, 95, 115	0
34	BM	136/136 (100%)	-0.38	1 (0%) 84 79	2, 11, 31, 83	0
34	DM	136/136 (100%)	0.83	9 (6%) 24 19	42, 69, 82, 101	0
35	BN	120/120 (100%)	-0.39	0 100 100	3, 8, 19, 53	0
35	DN	120/120 (100%)	1.77	42 (35%) 1 1	56, 76, 89, 116	0
36	BO	116/116 (100%)	-0.12	0 100 100	12, 27, 45, 52	0
36	DO	116/116 (100%)	1.21	17 (14%) 6 4	81, 95, 105, 115	0
37	BP	114/114 (100%)	-0.27	0 100 100	7, 18, 43, 66	0
37	DP	114/114 (100%)	1.21	19 (16%) 4 3	58, 70, 85, 93	0
38	BQ	117/117 (100%)	-0.45	0 100 100	1, 4, 15, 30	0
38	DQ	117/117 (100%)	1.34	26 (22%) 2 2	54, 67, 79, 83	0
39	BR	103/103 (100%)	-0.22	1 (0%) 79 73	1, 13, 33, 67	0
39	DR	103/103 (100%)	1.30	20 (19%) 3 2	52, 78, 88, 99	0
40	BS	110/110 (100%)	-0.38	1 (0%) 81 75	1, 5, 24, 79	0
40	DS	110/110 (100%)	1.57	30 (27%) 1 1	57, 75, 89, 101	0
41	BT	93/93 (100%)	0.28	5 (5%) 31 24	8, 26, 75, 104	0
41	DT	93/93 (100%)	2.09	44 (47%) 0 0	68, 87, 103, 119	0
42	BU	102/102 (100%)	-0.08	1 (0%) 79 73	14, 29, 63, 92	0
42	DU	102/102 (100%)	2.11	47 (46%) 0 0	75, 92, 111, 120	0
43	BV	94/94 (100%)	-0.28	0 100 100	6, 20, 41, 55	0
43	DV	94/94 (100%)	0.83	3 (3%) 50 41	70, 85, 96, 104	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	BW	76/76 (100%)	-0.10	1 (1%) 75 67	7, 13, 29, 53	0
44	DW	75/76 (98%)	1.60	20 (26%) 1 1	61, 80, 90, 104	0
45	BX	77/77 (100%)	0.02	1 (1%) 75 67	7, 23, 51, 72	0
45	DX	77/77 (100%)	1.60	23 (29%) 1 1	52, 70, 84, 88	0
46	BY	63/63 (100%)	0.40	6 (9%) 14 11	21, 39, 72, 94	0
46	DY	63/63 (100%)	1.92	26 (41%) 0 0	78, 95, 102, 106	0
47	BZ	58/58 (100%)	-0.27	0 100 100	1, 8, 24, 41	0
47	DZ	58/58 (100%)	1.14	8 (13%) 6 5	58, 71, 82, 95	0
48	B0	56/56 (100%)	-0.37	0 100 100	1, 12, 36, 69	0
48	D0	56/56 (100%)	1.42	12 (21%) 2 2	58, 79, 92, 102	0
49	B1	50/50 (100%)	0.11	2 (4%) 42 34	18, 29, 48, 76	0
49	D1	50/50 (100%)	1.57	17 (34%) 1 1	70, 86, 94, 105	0
50	B2	46/46 (100%)	-0.30	1 (2%) 62 53	4, 9, 15, 86	0
50	D2	46/46 (100%)	1.99	20 (43%) 0 0	55, 69, 80, 102	0
51	B3	64/64 (100%)	-0.24	0 100 100	5, 10, 20, 33	0
51	D3	64/64 (100%)	2.10	31 (48%) 0 0	58, 71, 79, 82	0
52	B4	38/38 (100%)	-0.11	0 100 100	8, 18, 37, 53	0
52	D4	38/38 (100%)	1.73	13 (34%) 1 1	59, 75, 87, 101	0
53	B5	191/228 (83%)	2.34	117 (61%) 0 0	101, 117, 128, 136	0
All	All	20734/20794 (99%)	0.60	2451 (11%) 9 7	1, 63, 121, 195	0

All (2451) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	CD	25	VAL	10.1
30	BI	53	LEU	9.6
22	BA	2184	A	8.8
22	BA	2185	U	8.5
22	BA	2140	G	8.4
1	AA	1535	C	8.3
50	D2	46	LYS	8.0
20	AT	68	HIS	8.0
1	AA	121	U	7.8
30	BI	79	LEU	7.8
41	DT	36	LYS	7.8

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Mol	Chain	Res	Type	RSRZ
37	DP	102	GLU	7.7
30	BI	78	VAL	7.6
30	BI	54	PRO	7.6
30	BI	2	ALA	7.4
1	CA	1535	C	7.3
22	BA	2152	G	7.2
22	BA	2100	G	7.2
1	CA	1539	C	7.1
22	BA	2174	C	6.9
20	CT	4	ILE	6.8
29	BH	119	ASN	6.8
21	CU	38	TYR	6.7
22	BA	2175	C	6.7
21	CU	45	ARG	6.6
21	AU	38	TYR	6.6
7	CG	62	PHE	6.5
30	BI	11	LEU	6.5
21	CU	35	ARG	6.3
53	B5	35	THR	6.3
22	BA	1925	C	6.3
30	DI	78	VAL	6.3
12	AL	25	GLU	6.2
22	BA	1926	U	6.2
1	AA	1534	A	6.1
22	BA	2101	A	6.1
19	CS	74	PHE	6.1
1	CA	1302	C	6.0
29	BH	121	VAL	6.0
30	BI	115	ALA	6.0
29	BH	146	VAL	6.0
29	DH	47	PHE	6.0
7	AG	5	ARG	5.9
22	BA	2145	C	5.9
41	DT	34	VAL	5.9
30	BI	12	GLN	5.8
8	AH	2	SER	5.8
22	BA	2144	G	5.7
6	CF	91	ARG	5.7
44	DW	52	GLY	5.7
53	B5	76	LEU	5.7
42	DU	58	ILE	5.6
10	CJ	102	LEU	5.6

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Mol	Chain	Res	Type	RSRZ
35	DN	25	ALA	5.6
42	DU	26	LYS	5.6
22	BA	2156	G	5.6
12	CL	25	GLU	5.5
30	DI	7	ALA	5.5
9	CI	128	SER	5.5
22	BA	2141	G	5.5
22	BA	2155	U	5.5
22	BA	2099	U	5.5
30	DI	54	PRO	5.5
29	BH	120	GLY	5.4
7	CG	75	VAL	5.4
30	BI	75	PRO	5.4
17	AQ	83	VAL	5.3
30	BI	13	VAL	5.3
7	CG	66	LEU	5.3
22	BA	2112	G	5.3
2	AB	155	GLY	5.3
1	AA	78	A	5.3
1	AA	1536	C	5.3
11	CK	126	LYS	5.3
22	BA	2135	A	5.3
19	CS	37	ARG	5.3
30	DI	58	VAL	5.2
29	BH	122	LEU	5.2
29	DH	92	GLY	5.2
42	DU	60	GLU	5.2
10	AJ	102	LEU	5.2
29	BH	144	VAL	5.1
35	DN	47	VAL	5.1
22	BA	2136	G	5.1
30	DI	53	LEU	5.1
22	BA	2103	C	5.1
2	CB	96	TRP	5.1
1	AA	1017	U	5.1
22	BA	2189	U	5.1
30	DI	27	ALA	5.1
14	CN	57	PRO	5.1
9	AI	129	LYS	5.1
49	D1	36	LEU	5.1
45	DX	20	HIS	5.1
30	DI	68	THR	5.1

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Mol	Chain	Res	Type	RSRZ
53	B5	120	VAL	5.1
38	DQ	2	ALA	5.1
53	B5	77	ALA	5.0
40	DS	19	LEU	5.0
24	DC	237	GLY	5.0
29	BH	52	ALA	5.0
30	DI	4	LYS	5.0
22	DA	2172	U	5.0
29	DH	90	LEU	5.0
30	BI	55	ILE	5.0
22	BA	2102	G	5.0
29	DH	58	LEU	5.0
14	AN	21	PHE	5.0
50	D2	42	LEU	5.0
40	DS	84	ARG	4.9
38	DQ	29	SER	4.9
9	CI	108	ALA	4.9
53	B5	79	ALA	4.9
9	CI	20	PHE	4.9
25	DD	128	ARG	4.9
17	AQ	20	SER	4.9
30	BI	27	ALA	4.9
46	DY	22	LEU	4.9
45	DX	49	LEU	4.8
29	BH	130	VAL	4.8
22	BA	2172	U	4.8
1	CA	1536	C	4.8
12	AL	124	ALA	4.8
30	DI	79	LEU	4.8
29	BH	91	PHE	4.8
9	CI	64	TYR	4.8
30	BI	3	LYS	4.8
30	DI	55	ILE	4.8
40	DS	40	ASN	4.8
30	DI	80	LEU	4.7
19	CS	66	MET	4.7
53	B5	216	THR	4.7
1	AA	1538	C	4.7
4	CD	24	GLY	4.7
29	BH	85	GLY	4.7
30	DI	2	ALA	4.7
42	DU	80	ALA	4.7

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Mol	Chain	Res	Type	RSRZ
45	DX	50	ARG	4.7
29	DH	146	VAL	4.7
41	DT	9	LYS	4.7
22	DA	75	G	4.7
22	BA	2158	A	4.7
22	DA	12	U	4.6
14	CN	51	LEU	4.6
30	BI	15	ALA	4.6
7	CG	103	TRP	4.6
22	BA	2190	G	4.6
29	DH	1	MET	4.6
29	BH	118	PRO	4.6
3	AC	168	TYR	4.6
22	BA	2147	A	4.6
22	BA	2107	G	4.6
29	BH	81	ALA	4.6
28	DG	10	VAL	4.6
30	BI	82	LYS	4.6
19	CS	15	LEU	4.6
31	DJ	81	ILE	4.6
10	CJ	100	ILE	4.5
13	CM	96	PRO	4.5
29	BH	63	ALA	4.5
44	DW	75	LYS	4.5
22	BA	2125	G	4.5
30	DI	77	ALA	4.5
24	DC	265	LYS	4.5
28	DG	9	VAL	4.5
30	BI	81	LYS	4.5
53	B5	121	MET	4.5
41	DT	43	ILE	4.5
29	BH	56	ALA	4.5
53	B5	36	ALA	4.5
38	DQ	15	LYS	4.5
7	CG	27	VAL	4.5
3	AC	193	TYR	4.5
30	BI	114	ALA	4.4
48	D0	2	ALA	4.4
53	B5	193	PHE	4.4
31	DJ	111	LYS	4.4
53	B5	87	ALA	4.4
29	DH	142	VAL	4.4

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Mol	Chain	Res	Type	RSRZ
29	DH	144	VAL	4.4
1	CA	1537	U	4.4
19	CS	69	HIS	4.4
19	CS	49	ILE	4.4
22	BA	2885	G	4.4
29	DH	82	SER	4.4
29	BH	70	GLU	4.4
6	AF	91	ARG	4.4
9	CI	119	ARG	4.4
13	CM	83	LEU	4.4
13	CM	89	LEU	4.4
10	CJ	41	PRO	4.4
22	BA	2123	G	4.4
22	BA	2186	G	4.4
46	DY	24	GLU	4.4
30	DI	13	VAL	4.3
38	DQ	8	VAL	4.3
3	AC	175	LEU	4.3
12	CL	124	ALA	4.3
22	BA	1072	C	4.3
22	BA	2150	C	4.3
25	DD	31	ALA	4.3
30	DI	98	VAL	4.3
52	D4	21	GLY	4.3
26	DE	88	ARG	4.3
29	BH	113	SER	4.3
33	DL	14	LYS	4.3
50	B2	46	LYS	4.3
22	BA	2183	A	4.3
13	CM	84	GLY	4.3
13	CM	103	LYS	4.3
33	DL	27	LEU	4.3
26	DE	119	ILE	4.3
29	DH	94	ILE	4.3
20	CT	68	HIS	4.3
2	AB	156	GLY	4.3
29	DH	54	LEU	4.3
34	DM	61	GLY	4.3
22	BA	2182	U	4.3
26	DE	55	SER	4.3
1	CA	1320	C	4.3
24	DC	49	ILE	4.3

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Mol	Chain	Res	Type	RSRZ
24	DC	64	ILE	4.3
53	B5	50	ILE	4.3
29	BH	84	ALA	4.3
29	BH	147	VAL	4.3
29	DH	147	VAL	4.3
30	BI	56	PRO	4.3
13	CM	31	LYS	4.3
13	CM	69	LEU	4.3
30	DI	11	LEU	4.3
38	DQ	23	GLY	4.3
3	CC	162	ILE	4.2
31	DJ	119	PHE	4.2
3	CC	193	TYR	4.2
22	BA	2143	C	4.2
21	CU	14	VAL	4.2
38	DQ	11	ARG	4.2
29	BH	67	ALA	4.2
29	BH	54	LEU	4.2
33	DL	92	LEU	4.2
22	BA	2139	U	4.2
22	DA	1537	G	4.2
41	DT	76	ARG	4.2
52	D4	10	LEU	4.2
29	DH	88	GLY	4.2
41	DT	80	TRP	4.2
19	CS	3	ARG	4.2
26	DE	153	LEU	4.2
1	CA	1538	C	4.2
22	BA	2153	C	4.2
53	B5	208	THR	4.2
53	B5	75	VAL	4.2
24	BC	235	GLY	4.2
24	DC	254	GLY	4.2
27	DF	32	GLU	4.2
30	DI	109	ILE	4.2
40	DS	85	ILE	4.2
22	BA	2160	C	4.1
22	BA	2124	G	4.1
39	DR	76	LYS	4.1
51	D3	26	HIS	4.1
41	DT	62	VAL	4.1
14	AN	36	ALA	4.1

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Mol	Chain	Res	Type	RSRZ
22	BA	2106	U	4.1
26	DE	42	GLY	4.1
13	CM	63	PHE	4.1
48	D0	27	SER	4.1
7	AG	109	ARG	4.1
29	BH	115	VAL	4.1
13	CM	86	TYR	4.1
30	DI	15	ALA	4.1
30	DI	133	ALA	4.1
11	AK	126	LYS	4.1
38	DQ	22	LYS	4.1
51	D3	28	ASN	4.1
4	AD	28	ILE	4.1
4	CD	28	ILE	4.1
41	BT	1	MET	4.1
53	B5	78	ILE	4.1
14	CN	58	SER	4.1
41	DT	57	VAL	4.0
13	CM	10	PRO	4.0
29	DH	100	ALA	4.0
25	DD	126	ASN	4.0
36	DO	58	ILE	4.0
24	BC	240	PHE	4.0
46	DY	48	ARG	4.0
1	AA	1030	U	4.0
29	DH	37	VAL	4.0
30	BI	23	PRO	4.0
22	BA	2148	G	4.0
13	CM	73	ILE	4.0
32	DK	68	GLY	4.0
14	CN	20	TYR	4.0
30	BI	38	PHE	4.0
2	AB	157	LEU	4.0
1	AA	990	C	4.0
22	BA	2177	C	4.0
29	BH	96	THR	4.0
29	BH	110	VAL	4.0
32	DK	35	VAL	4.0
29	BH	86	ASP	4.0
17	AQ	5	ILE	4.0
30	BI	86	ILE	4.0
1	AA	1492	A	4.0

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Mol	Chain	Res	Type	RSRZ
7	CG	5	ARG	4.0
21	CU	37	PHE	4.0
4	CD	151	LYS	4.0
30	BI	83	ALA	4.0
41	DT	41	ALA	4.0
51	D3	37	ALA	4.0
1	AA	1016	A	4.0
22	BA	2193	G	4.0
22	DA	2250	G	4.0
24	DC	242	LYS	4.0
41	DT	33	LYS	4.0
17	CQ	23	VAL	4.0
1	CA	121	U	3.9
4	AD	37	ALA	3.9
38	DQ	9	ILE	3.9
40	DS	46	LEU	3.9
12	CL	44	LYS	3.9
10	CJ	43	PRO	3.9
42	DU	55	PRO	3.9
13	CM	45	ILE	3.9
13	CM	98	ARG	3.9
22	DA	795	C	3.9
30	BI	8	TYR	3.9
29	BH	99	ILE	3.9
33	DL	15	ALA	3.9
41	BT	69	ARG	3.9
22	BA	2192	U	3.9
14	CN	27	LEU	3.9
49	D1	53	LYS	3.9
51	D3	57	LEU	3.9
12	CL	38	TYR	3.9
29	BH	68	ARG	3.9
53	B5	199	ALA	3.9
22	BA	2142	A	3.9
32	DK	101	GLY	3.9
33	DL	34	GLY	3.9
44	DW	44	LYS	3.9
1	CA	1321	U	3.9
53	B5	38	PHE	3.9
12	AL	38	TYR	3.9
19	CS	58	VAL	3.9
29	DH	78	VAL	3.9

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Mol	Chain	Res	Type	RSRZ
29	DH	38	PRO	3.9
8	CH	2	SER	3.9
22	BA	2178	C	3.9
22	DA	331	C	3.9
9	CI	54	LEU	3.8
22	BA	2191	A	3.8
13	CM	97	VAL	3.8
24	DC	172	VAL	3.8
26	DE	96	VAL	3.8
29	DH	148	ALA	3.8
1	CA	1305	G	3.8
14	CN	46	LEU	3.8
30	BI	52	GLY	3.8
10	CJ	76	ILE	3.8
13	CM	7	ILE	3.8
12	CL	26	ALA	3.8
14	CN	48	LEU	3.8
29	BH	124	THR	3.8
53	B5	122	GLY	3.8
33	DL	106	GLU	3.8
22	BA	2138	G	3.8
10	AJ	75	ASP	3.8
53	B5	146	VAL	3.8
7	CG	4	ARG	3.8
50	D2	33	ARG	3.8
24	DC	232	HIS	3.8
9	CI	68	LYS	3.8
24	DC	18	LYS	3.8
30	DI	114	ALA	3.8
53	B5	123	ALA	3.8
40	DS	97	LEU	3.8
13	CM	108	THR	3.8
53	B5	217	THR	3.8
7	AG	4	ARG	3.8
29	DH	19	VAL	3.8
39	DR	75	VAL	3.8
22	BA	2127	G	3.8
22	DA	1248	G	3.8
21	CU	41	PRO	3.8
22	DA	2000	C	3.8
29	BH	71	LYS	3.8
30	DI	74	PRO	3.8

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Mol	Chain	Res	Type	RSRZ
22	BA	1923	U	3.8
22	BA	2098	U	3.8
37	DP	95	ALA	3.8
22	DA	74	A	3.8
22	DA	1347	A	3.8
46	DY	56	LEU	3.8
16	CP	3	THR	3.8
24	BC	272	SER	3.7
21	AU	47	ARG	3.7
29	DH	3	VAL	3.7
26	DE	73	ILE	3.7
29	BH	94	ILE	3.7
29	DH	80	ILE	3.7
42	DU	5	ILE	3.7
45	DX	77	LYS	3.7
51	D3	24	HIS	3.7
22	BA	546	U	3.7
30	BI	80	LEU	3.7
33	DL	19	LEU	3.7
22	DA	329	G	3.7
53	B5	96	GLY	3.7
29	BH	55	GLU	3.7
46	DY	59	GLU	3.7
30	DI	24	VAL	3.7
14	CN	99	ALA	3.7
26	DE	135	ALA	3.7
30	DI	76	ALA	3.7
22	BA	1924	C	3.7
9	AI	43	THR	3.7
1	AA	1018	G	3.7
22	BA	2168	G	3.7
22	DA	801	G	3.7
24	DC	238	ARG	3.7
41	DT	73	ARG	3.7
29	DH	83	LYS	3.7
30	BI	24	VAL	3.7
30	DI	10	LYS	3.7
53	B5	23	ILE	3.7
15	AO	57	LEU	3.7
29	BH	102	ALA	3.7
51	D3	48	ALA	3.7
52	D4	9	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
2	CB	164	ILE	3.7
13	CM	60	VAL	3.7
16	AP	4	ILE	3.7
27	DF	25	VAL	3.7
30	DI	59	ILE	3.7
53	B5	202	PRO	3.7
13	CM	80	LEU	3.7
29	BH	148	ALA	3.7
29	DH	56	ALA	3.7
29	DH	20	ASN	3.7
1	AA	1537	U	3.7
30	BI	5	VAL	3.7
22	DA	1278	C	3.6
30	DI	22	PRO	3.6
30	DI	56	PRO	3.6
10	CJ	54	SER	3.6
4	CD	37	ALA	3.6
29	BH	69	ALA	3.6
2	CB	132	LYS	3.6
10	CJ	45	ARG	3.6
16	AP	80	LYS	3.6
13	CM	85	CYS	3.6
18	CR	20	GLU	3.6
53	B5	25	GLU	3.6
22	DA	1217	U	3.6
22	DA	2402	U	3.6
19	CS	5	LEU	3.6
29	BH	58	LEU	3.6
51	D3	25	LYS	3.6
2	CB	13	GLY	3.6
10	CJ	19	ASP	3.6
29	BH	88	GLY	3.6
39	BR	50	GLY	3.6
7	CG	6	VAL	3.6
9	CI	7	TYR	3.6
10	CJ	77	VAL	3.6
52	D4	3	VAL	3.6
10	CJ	42	LEU	3.6
29	BH	111	ALA	3.6
29	DH	10	ALA	3.6
29	DH	81	ALA	3.6
36	DO	57	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
10	CJ	59	LYS	3.6
30	BI	4	LYS	3.6
49	B1	53	LYS	3.6
29	BH	123	ARG	3.6
34	DM	6	ARG	3.6
25	DD	144	GLY	3.6
33	DL	101	ILE	3.6
35	DN	97	ILE	3.6
53	B5	110	ASP	3.6
40	DS	36	LEU	3.6
19	CS	76	PRO	3.6
30	DI	26	PRO	3.6
22	DA	1093	G	3.6
20	CT	63	ALA	3.6
30	BI	133	ALA	3.6
10	CJ	72	ARG	3.6
12	CL	14	ARG	3.6
53	B5	28	ARG	3.6
30	BI	69	PHE	3.6
24	DC	27	GLY	3.6
14	CN	34	VAL	3.6
29	DH	149	GLU	3.6
33	DL	116	VAL	3.6
28	DG	157	TYR	3.6
1	AA	1021	A	3.6
2	CB	148	LEU	3.6
41	BT	93	LEU	3.6
42	DU	27	ASN	3.6
19	CS	39	THR	3.6
17	CQ	53	CYS	3.5
30	BI	22	PRO	3.6
12	AL	15	LYS	3.5
5	CE	110	ALA	3.5
53	B5	205	ALA	3.5
22	BA	2111	U	3.5
1	CA	211	G	3.5
29	DH	95	GLY	3.5
35	DN	26	GLY	3.5
42	DU	39	ILE	3.5
28	DG	62	TRP	3.5
26	DE	134	LEU	3.5
30	DI	28	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
35	DN	24	MET	3.5
29	DH	43	ASN	3.5
26	DE	95	LYS	3.5
36	DO	12	THR	3.5
42	DU	47	LYS	3.5
49	D1	10	LYS	3.5
22	BA	2169	A	3.5
14	AN	44	ALA	3.5
30	DI	14	ALA	3.5
40	DS	99	ARG	3.5
22	DA	2690	U	3.5
25	DD	97	SER	3.5
28	DG	4	VAL	3.5
53	B5	145	THR	3.5
21	AU	35	ARG	3.5
29	BH	97	ARG	3.5
7	CG	150	ALA	3.5
30	DI	83	ALA	3.5
22	DA	76	C	3.5
22	DA	332	A	3.5
22	DA	2126	A	3.5
22	DA	2174	C	3.5
24	DC	240	PHE	3.5
29	DH	132	PHE	3.5
30	DI	35	ILE	3.5
12	CL	16	VAL	3.5
45	DX	22	LEU	3.5
13	CM	13	LYS	3.5
29	DH	32	PRO	3.5
51	D3	46	PRO	3.5
30	BI	71	THR	3.5
10	CJ	94	ALA	3.5
38	DQ	37	GLN	3.5
29	DH	91	PHE	3.5
42	DU	12	ILE	3.5
22	BA	885	C	3.5
22	BA	2104	C	3.5
4	AD	151	LYS	3.5
29	BH	117	LEU	3.5
53	B5	126	SER	3.5
13	CM	29	ARG	3.5
30	DI	60	THR	3.5

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Mol	Chain	Res	Type	RSRZ
30	DI	132	THR	3.5
13	CM	106	ALA	3.5
38	DQ	59	GLN	3.4
16	CP	39	PHE	3.4
22	DA	356	G	3.4
25	DD	166	GLY	3.4
29	BH	108	VAL	3.4
46	DY	18	LEU	3.4
22	BA	1094	U	3.4
26	DE	89	PRO	3.4
9	CI	44	ALA	3.4
29	BH	74	ALA	3.4
42	DU	71	ALA	3.4
53	B5	21	TYR	3.4
30	DI	86	ILE	3.4
30	DI	101	ILE	3.4
30	DI	38	PHE	3.4
29	DH	22	LYS	3.4
28	DG	168	VAL	3.4
29	DH	126	GLY	3.4
30	BI	70	VAL	3.4
35	DN	28	LEU	3.4
41	DT	8	LEU	3.4
14	CN	59	ARG	3.4
35	DN	17	ARG	3.4
22	BA	2114	A	3.4
22	BA	2154	A	3.4
22	DA	354	A	3.4
30	BI	74	PRO	3.4
22	DA	2008	C	3.4
14	CN	8	ALA	3.4
2	CB	213	TYR	3.4
53	B5	84	ILE	3.4
53	B5	150	ILE	3.4
24	DC	26	LYS	3.4
26	DE	158	PHE	3.4
28	DG	6	LYS	3.4
51	D3	44	LEU	3.4
5	CE	157	ARG	3.4
45	DX	11	ARG	3.4
46	DY	47	ARG	3.4
53	B5	141	PRO	3.4

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Mol	Chain	Res	Type	RSRZ
1	CA	532	A	3.4
7	CG	72	THR	3.4
30	DI	129	ILE	3.4
41	DT	74	ILE	3.4
22	DA	1606	C	3.4
50	D2	1	MET	3.4
26	DE	97	ASN	3.4
27	DF	23	ASN	3.4
6	AF	61	LEU	3.4
10	CJ	57	VAL	3.4
17	CQ	78	VAL	3.4
33	DL	102	GLY	3.4
39	DR	96	VAL	3.4
49	D1	18	GLY	3.4
41	DT	12	ARG	3.4
14	CN	70	PRO	3.4
30	BI	63	ALA	3.4
41	DT	15	HIS	3.4
42	DU	3	ALA	3.4
50	D2	32	ALA	3.4
1	CA	1540	U	3.4
20	CT	69	LYS	3.4
22	BA	2113	U	3.4
22	BA	2130	U	3.4
29	BH	131	SER	3.4
29	DH	99	ILE	3.4
49	D1	24	THR	3.4
1	CA	983	A	3.4
22	DA	2173	A	3.4
29	DH	25	TYR	3.4
35	DN	83	LEU	3.3
51	D3	29	LEU	3.3
9	CI	55	VAL	3.3
22	BA	1093	G	3.3
29	BH	11	ASN	3.3
41	DT	10	VAL	3.3
29	DH	85	GLY	3.3
53	B5	97	GLY	3.3
7	CG	12	ILE	3.3
28	DG	26	ILE	3.3
29	BH	140	ALA	3.3
2	CB	20	THR	3.3

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Mol	Chain	Res	Type	RSRZ
30	BI	118	THR	3.3
30	DI	118	THR	3.3
6	CF	39	LEU	3.3
4	AD	63	ARG	3.3
19	CS	68	GLY	3.3
20	CT	3	ASN	3.3
26	DE	103	GLY	3.3
29	BH	51	ARG	3.3
22	BA	2163	A	3.3
22	BA	2171	A	3.3
22	DA	1175	A	3.3
22	DA	509	C	3.3
27	DF	65	PRO	3.3
37	DP	94	LYS	3.3
20	AT	4	ILE	3.3
29	DH	23	ALA	3.3
28	DG	33	LEU	3.3
46	DY	43	LEU	3.3
26	DE	131	THR	3.3
24	DC	220	VAL	3.3
32	BK	35	VAL	3.3
13	CM	110	LYS	3.3
29	DH	118	PRO	3.3
52	D4	2	LYS	3.3
53	B5	83	LYS	3.3
2	CB	151	ILE	3.3
30	BI	77	ALA	3.3
35	DN	55	ALA	3.3
1	CA	1304	G	3.3
16	AP	6	LEU	3.3
2	CB	139	ARG	3.3
9	CI	32	GLN	3.3
27	DF	157	THR	3.3
39	DR	20	VAL	3.3
42	DU	36	VAL	3.3
7	CG	112	GLY	3.3
53	B5	207	GLY	3.3
19	CS	73	GLU	3.3
29	BH	83	LYS	3.3
1	CA	994	A	3.3
22	DA	2725	A	3.3
27	DF	156	ILE	3.3

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Mol	Chain	Res	Type	RSRZ
27	DF	66	LEU	3.3
44	DW	60	PHE	3.3
13	CM	101	ARG	3.3
30	DI	134	ARG	3.3
19	CS	60	VAL	3.3
27	DF	28	VAL	3.3
53	B5	124	VAL	3.3
28	DG	80	THR	3.3
12	CL	92	GLY	3.3
52	D4	15	LYS	3.2
24	DC	244	PRO	3.2
42	DU	35	ILE	3.2
7	AG	142	HIS	3.2
13	CM	14	HIS	3.2
43	DV	94	ALA	3.2
21	CU	16	LEU	3.2
46	DY	57	LEU	3.2
7	AG	75	VAL	3.2
30	DI	9	VAL	3.2
35	DN	18	GLN	3.2
42	DU	83	VAL	3.2
53	B5	95	VAL	3.2
36	DO	4	LYS	3.2
21	AU	24	GLU	3.2
35	DN	27	SER	3.2
22	BA	549	G	3.2
22	BA	2149	U	3.2
13	CM	40	ALA	3.2
29	BH	106	ALA	3.2
14	CN	61	ARG	3.2
46	BY	23	ARG	3.2
22	DA	2602	A	3.2
30	BI	16	GLY	3.2
16	CP	47	GLU	3.2
30	DI	130	GLU	3.2
19	CS	44	MET	3.2
22	BA	2164	C	3.2
40	DS	96	ILE	3.2
22	BA	2181	U	3.2
35	DN	10	LEU	3.2
53	B5	27	ALA	3.2
53	B5	132	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
10	CJ	5	ARG	3.2
22	BA	2157	G	3.2
22	DA	914	G	3.2
9	CI	67	VAL	3.2
21	AU	54	LYS	3.2
24	DC	249	GLY	3.2
22	BA	1098	A	3.2
44	DW	17	GLU	3.2
1	CA	1317	C	3.2
29	DH	5	LEU	3.2
46	DY	28	LEU	3.2
22	DA	1094	U	3.2
29	BH	105	ALA	3.2
30	DI	42	PHE	3.2
44	DW	71	VAL	3.2
22	BA	1171	G	3.2
22	BA	2162	G	3.2
22	DA	333	G	3.2
45	DX	75	GLY	3.2
31	DJ	1	MET	3.2
44	BW	10	THR	3.2
18	AR	20	GLU	3.2
21	CU	47	ARG	3.1
20	CT	72	ALA	3.1
21	CU	13	ASP	3.1
30	BI	14	ALA	3.1
46	DY	32	ALA	3.1
7	CG	76	LYS	3.1
19	CS	41	PHE	3.1
22	DA	2150	C	3.1
53	B5	44	VAL	3.1
9	AI	46	MET	3.1
49	D1	22	THR	3.1
13	CM	22	ILE	3.1
25	DD	27	ILE	3.1
27	DF	84	PRO	3.1
37	DP	22	PRO	3.1
10	CJ	10	LEU	3.1
13	CM	109	ARG	3.1
16	CP	17	TYR	3.1
9	CI	16	ALA	3.1
14	CN	2	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
24	DC	38	SER	3.1
29	BH	65	ALA	3.1
29	DH	39	ALA	3.1
7	CG	43	VAL	3.1
42	DU	67	VAL	3.1
30	DI	25	GLY	3.1
41	BT	2	ILE	3.1
13	CM	112	PRO	3.1
7	CG	152	ALA	3.1
2	CB	16	PHE	3.1
13	AM	8	ASN	3.1
13	CM	16	VAL	3.1
29	DH	130	VAL	3.1
30	DI	21	SER	3.1
42	DU	31	SER	3.1
22	BA	1913	A	3.1
22	DA	1205	A	3.1
22	DA	1608	A	3.1
22	BA	138	U	3.1
22	BA	2402	U	3.1
22	BA	2146	C	3.1
22	BA	2165	C	3.1
19	AS	5	LEU	3.1
41	DT	11	LEU	3.1
29	DH	35	LYS	3.1
40	DS	73	LYS	3.1
19	CS	34	TRP	3.1
27	DF	75	ALA	3.1
51	D3	64	TYR	3.1
19	CS	51	VAL	3.1
53	B5	176	VAL	3.1
19	CS	35	SER	3.1
25	DD	139	SER	3.1
26	DE	70	SER	3.1
42	DU	53	ASN	3.1
42	DU	78	GLY	3.1
45	DX	9	GLY	3.1
1	CA	4	U	3.1
22	DA	2149	U	3.1
10	CJ	71	LEU	3.1
28	DG	177	LYS	3.1
30	DI	81	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
42	BU	52	LEU	3.1
51	D3	23	LYS	3.1
1	AA	1031	C	3.1
1	CA	1243	C	3.1
9	CI	17	ALA	3.0
53	B5	143	ALA	3.0
14	AN	42	TRP	3.0
9	CI	127	PHE	3.0
19	CS	10	PHE	3.0
21	AU	14	VAL	3.0
26	DE	178	VAL	3.0
30	BI	57	VAL	3.0
38	DQ	39	VAL	3.0
39	DR	72	VAL	3.0
30	BI	89	GLY	3.0
27	DF	154	ILE	3.0
28	BG	24	ILE	3.0
29	BH	72	ILE	3.0
29	DH	44	ILE	3.0
9	AI	54	LEU	3.0
9	CI	98	LEU	3.0
19	CS	31	LEU	3.0
19	CS	71	LEU	3.0
20	CT	33	LYS	3.0
29	BH	87	GLU	3.0
29	DH	75	LEU	3.0
30	DI	82	LYS	3.0
41	DT	42	GLU	3.0
51	D3	3	LYS	3.0
53	B5	86	GLU	3.0
1	AA	1019	A	3.0
22	DA	326	G	3.0
22	DA	474	G	3.0
7	CG	128	ALA	3.0
2	CB	32	PHE	3.0
7	CG	151	PHE	3.0
31	DJ	47	HIS	3.0
1	AA	1539	C	3.0
1	CA	979	C	3.0
30	DI	8	TYR	3.0
53	B5	166	ASN	3.0
5	CE	30	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
26	DE	175	ILE	3.0
35	DN	113	ILE	3.0
42	DU	20	GLY	3.0
13	CM	27	LYS	3.0
29	DH	89	LYS	3.0
50	D2	2	LYS	3.0
52	D4	23	ILE	3.0
53	B5	37	LYS	3.0
2	CB	135	LEU	3.0
29	DH	15	LEU	3.0
53	B5	69	LEU	3.0
7	CG	88	PRO	3.0
1	AA	1493	A	3.0
4	AD	43	ALA	3.0
22	BA	2134	A	3.0
30	DI	110	ALA	3.0
7	CG	91	VAL	3.0
10	AJ	84	VAL	3.0
19	CS	14	HIS	3.0
29	DH	29	PHE	3.0
1	CA	987	G	3.0
22	BA	2159	G	3.0
1	AA	995	C	3.0
13	CM	87	ARG	3.0
20	CT	67	ILE	3.0
22	DA	336	C	3.0
29	BH	107	GLY	3.0
30	BI	49	ILE	3.0
48	D0	57	LYS	3.0
52	D4	18	LYS	3.0
29	DH	136	SER	3.0
30	DI	138	LEU	3.0
32	DK	104	THR	3.0
7	CG	73	VAL	3.0
7	CG	87	VAL	3.0
21	CU	53	VAL	3.0
27	DF	74	VAL	3.0
46	DY	46	VAL	3.0
53	B5	63	VAL	3.0
1	CA	1236	A	3.0
20	AT	5	LYS	3.0
38	DQ	65	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
45	DX	3	ARG	3.0
45	DX	18	ARG	3.0
49	D1	21	TYR	3.0
29	DH	143	ILE	3.0
53	B5	100	ILE	3.0
2	CB	129	LEU	3.0
12	CL	24	LEU	3.0
14	AN	27	LEU	3.0
46	DY	45	GLN	3.0
53	B5	137	LEU	3.0
22	DA	669	G	3.0
19	CS	9	PRO	3.0
22	BA	2161	C	3.0
27	BF	176	PRO	3.0
30	DI	75	PRO	3.0
53	B5	134	PRO	3.0
2	CB	136	MET	3.0
13	CM	18	ALA	3.0
2	CB	107	VAL	3.0
13	CM	43	VAL	3.0
22	BA	2166	U	3.0
3	CC	80	LYS	2.9
17	CQ	16	LYS	2.9
19	CS	7	LYS	2.9
30	BI	97	LYS	2.9
14	CN	24	ARG	2.9
1	AA	412	A	2.9
9	CI	38	TYR	2.9
29	DH	117	LEU	2.9
51	D3	18	GLY	2.9
29	DH	11	ASN	2.9
42	DU	69	ASN	2.9
45	DX	31	PRO	2.9
2	CB	110	SER	2.9
51	D3	61	CYS	2.9
8	CH	130	ALA	2.9
14	CN	22	ALA	2.9
26	DE	36	ALA	2.9
27	DF	54	ALA	2.9
46	BY	63	ALA	2.9
7	CG	133	THR	2.9
28	DG	11	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
30	DI	5	VAL	2.9
34	DM	129	THR	2.9
53	B5	218	THR	2.9
1	AA	842	U	2.9
13	AM	87	ARG	2.9
13	CM	33	ILE	2.9
30	DI	106	LEU	2.9
40	DS	80	PRO	2.9
29	BH	66	ASN	2.9
10	CJ	61	ALA	2.9
29	BH	134	VAL	2.9
29	DH	106	ALA	2.9
30	BI	9	VAL	2.9
30	BI	58	VAL	2.9
53	B5	187	ALA	2.9
3	CC	192	THR	2.9
25	DD	133	THR	2.9
30	DI	3	LYS	2.9
44	DW	45	PHE	2.9
12	AL	14	ARG	2.9
17	CQ	6	ARG	2.9
22	DA	946	C	2.9
29	DH	27	ARG	2.9
1	CA	94	G	2.9
37	DP	84	ILE	2.9
22	DA	355	U	2.9
24	DC	12	GLY	2.9
25	DD	135	GLY	2.9
28	DG	8	PRO	2.9
33	DL	62	PRO	2.9
53	B5	52	PRO	2.9
8	CH	3	MET	2.9
29	BH	60	GLU	2.9
10	CJ	58	ASN	2.9
13	AM	105	ASN	2.9
28	DG	166	ASP	2.9
7	CG	134	ALA	2.9
21	AU	28	VAL	2.9
21	AU	53	VAL	2.9
29	DH	140	ALA	2.9
30	DI	139	VAL	2.9
36	DO	103	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
41	DT	40	LYS	2.9
41	DT	67	VAL	2.9
2	CB	18	HIS	2.9
29	DH	96	THR	2.9
20	AT	12	ILE	2.9
49	D1	48	ILE	2.9
46	DY	21	LEU	2.9
22	BA	1058	U	2.9
22	BA	2188	U	2.9
4	AD	22	LYS	2.9
14	CN	44	ALA	2.9
29	DH	84	ALA	2.9
30	BI	61	VAL	2.9
53	B5	59	VAL	2.9
3	CC	37	PHE	2.9
6	CF	8	PHE	2.9
7	AG	26	PHE	2.9
17	CQ	65	ARG	2.9
22	BA	2176	A	2.9
26	DE	165	HIS	2.9
44	DW	55	ARG	2.9
3	CC	165	THR	2.9
14	CN	50	THR	2.9
30	BI	68	THR	2.9
7	AG	12	ILE	2.9
9	CI	63	LEU	2.9
13	CM	95	LEU	2.9
24	DC	205	LEU	2.9
29	DH	4	ILE	2.9
26	DE	82	GLY	2.8
32	DK	81	GLY	2.8
33	DL	53	GLY	2.8
3	CC	167	TRP	2.8
4	CD	36	GLN	2.8
30	DI	23	PRO	2.8
7	CG	114	LYS	2.8
10	CJ	11	LYS	2.8
21	CU	54	LYS	2.8
29	BH	53	GLU	2.8
26	DE	67	ARG	2.8
26	DE	128	ALA	2.8
26	DE	182	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
29	BH	103	VAL	2.8
29	DH	36	ALA	2.8
40	DS	76	VAL	2.8
2	AB	69	PHE	2.8
5	CE	70	ASN	2.8
38	DQ	33	ARG	2.8
53	B5	90	ALA	2.8
7	CG	26	PHE	2.8
18	AR	74	HIS	2.8
45	DX	35	SER	2.8
5	AE	103	THR	2.8
7	CG	59	LEU	2.8
10	CJ	25	ILE	2.8
24	DC	93	LEU	2.8
37	DP	110	ILE	2.8
41	DT	61	LEU	2.8
1	CA	1534	A	2.8
22	DA	1755	A	2.8
30	BI	137	GLY	2.8
30	DI	32	GLY	2.8
26	DE	90	GLN	2.8
30	DI	31	GLN	2.8
30	DI	95	LYS	2.8
41	DT	68	LYS	2.8
51	D3	15	LYS	2.8
21	CU	39	GLU	2.8
29	BH	114	GLU	2.8
22	BA	2187	U	2.8
22	DA	2585	U	2.8
43	DV	57	TYR	2.8
2	CB	14	VAL	2.8
19	CS	78	ARG	2.8
13	AM	63	PHE	2.8
22	BA	2129	C	2.8
24	DC	214	ARG	2.8
25	DD	192	ALA	2.8
28	DG	170	ARG	2.8
30	DI	63	ALA	2.8
47	DZ	53	PHE	2.8
13	CM	12	HIS	2.8
35	DN	44	LEU	2.8
51	D3	4	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
19	CS	63	THR	2.8
22	BA	1087	G	2.8
26	DE	43	THR	2.8
29	BH	77	THR	2.8
53	B5	62	THR	2.8
2	CB	9	MET	2.8
22	BA	1057	A	2.8
36	DO	3	LYS	2.8
9	AI	116	VAL	2.8
10	CJ	98	VAL	2.8
14	AN	45	VAL	2.8
15	AO	89	ARG	2.8
18	AR	73	ARG	2.8
19	CS	62	VAL	2.8
19	CS	67	VAL	2.8
19	CS	80	TYR	2.8
5	AE	31	PHE	2.8
14	AN	2	ALA	2.8
14	CN	21	PHE	2.8
26	DE	104	ALA	2.8
35	DN	111	ALA	2.8
47	DZ	2	ALA	2.8
7	CG	7	ILE	2.8
30	BI	109	ILE	2.8
30	DI	49	ILE	2.8
2	CB	88	ASP	2.8
22	DA	1330	C	2.8
12	AL	44	LYS	2.8
30	DI	92	LYS	2.8
34	BM	5	LYS	2.8
46	DY	44	LYS	2.8
51	D3	39	LYS	2.8
1	CA	1242	G	2.8
1	CA	1312	G	2.8
1	CA	1441	A	2.8
5	CE	74	VAL	2.8
14	CN	11	VAL	2.8
29	DH	103	VAL	2.8
33	DL	71	ALA	2.8
37	DP	108	ALA	2.8
39	DR	35	PHE	2.8
42	DU	75	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
42	DU	76	ALA	2.8
53	B5	111	PHE	2.8
1	CA	1235	U	2.8
9	CI	83	ILE	2.8
30	DI	126	THR	2.8
46	BY	2	LYS	2.8
22	BA	2179	C	2.8
22	DA	1644	C	2.8
5	CE	158	GLY	2.8
53	B5	107	GLY	2.8
19	AS	56	GLN	2.7
26	DE	94	GLN	2.7
14	CN	26	GLU	2.7
2	AB	14	VAL	2.7
2	CB	92	VAL	2.7
5	CE	114	VAL	2.7
7	CG	105	VAL	2.7
4	CD	27	ALA	2.7
1	CA	1032	G	2.7
5	CE	124	LEU	2.7
10	CJ	92	LEU	2.7
19	CS	13	LEU	2.7
22	DA	325	G	2.7
22	DA	1073	A	2.7
26	DE	78	TRP	2.7
28	DG	174	ALA	2.7
22	DA	1311	G	2.7
33	DL	107	PHE	2.7
53	B5	164	PHE	2.7
26	DE	164	LEU	2.7
33	DL	61	LEU	2.7
41	DT	50	LEU	2.7
42	DU	14	LEU	2.7
2	AB	152	LYS	2.7
3	CC	79	LYS	2.7
25	DD	157	LYS	2.7
37	DP	111	LYS	2.7
24	DC	239	ASN	2.7
30	BI	132	THR	2.7
39	DR	19	THR	2.7
45	DX	25	THR	2.7
2	CB	149	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
5	CE	108	GLY	2.7
24	DC	235	GLY	2.7
30	DI	16	GLY	2.7
19	AS	32	ARG	2.7
35	DN	22	ARG	2.7
41	DT	55	VAL	2.7
2	CB	206	ALA	2.7
4	AD	27	ALA	2.7
14	CN	29	ALA	2.7
25	DD	209	ALA	2.7
30	DI	41	ALA	2.7
2	CB	67	ILE	2.7
41	DT	93	LEU	2.7
47	DZ	29	LEU	2.7
26	DE	92	HIS	2.7
1	CA	1280	A	2.7
22	DA	1808	A	2.7
50	D2	22	MET	2.7
22	BA	2121	G	2.7
53	B5	39	ASP	2.7
4	AD	46	PRO	2.7
38	DQ	13	ARG	2.7
42	DU	48	PRO	2.7
53	B5	60	ARG	2.7
53	B5	183	PRO	2.7
29	BH	93	SER	2.7
30	BI	88	SER	2.7
44	DW	16	SER	2.7
4	AD	36	GLN	2.7
35	DN	9	GLN	2.7
26	DE	146	VAL	2.7
29	DH	9	VAL	2.7
30	BI	33	VAL	2.7
30	DI	140	VAL	2.7
33	DL	89	VAL	2.7
53	B5	73	VAL	2.7
1	CA	1031	C	2.7
3	CC	95	ALA	2.7
7	CG	13	LEU	2.7
10	AJ	92	LEU	2.7
16	AP	81	ALA	2.7
22	DA	183	C	2.7

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Mol	Chain	Res	Type	RSRZ
29	DH	6	LEU	2.7
29	DH	30	LEU	2.7
30	BI	106	LEU	2.7
31	DJ	142	ILE	2.7
42	DU	52	LEU	2.7
46	DY	26	PHE	2.7
37	DP	63	LYS	2.7
17	CQ	31	HIS	2.7
27	DF	128	TYR	2.7
46	DY	30	MET	2.7
1	CA	977	A	2.7
22	BA	2173	A	2.7
9	CI	66	THR	2.7
19	CS	33	THR	2.7
26	DE	17	THR	2.7
34	DM	10	ARG	2.7
36	DO	16	ARG	2.7
1	CA	1331	G	2.7
28	DG	2	SER	2.7
25	DD	9	VAL	2.7
29	DH	21	VAL	2.7
35	DN	76	VAL	2.7
6	AF	54	LEU	2.7
10	CJ	73	LEU	2.7
29	BH	62	LEU	2.7
29	BH	90	LEU	2.7
29	BH	139	PHE	2.7
29	BH	143	ILE	2.7
44	DW	59	LEU	2.7
46	DY	19	LEU	2.7
41	DT	83	ALA	2.7
42	DU	51	ALA	2.7
48	D0	55	ILE	2.7
2	CB	37	LYS	2.7
29	BH	112	LYS	2.7
33	DL	84	LYS	2.7
7	CG	142	HIS	2.7
13	CM	91	HIS	2.7
1	CA	1218	C	2.7
22	BA	1914	C	2.7
13	AM	113	ARG	2.7
19	CS	55	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
36	DO	13	ARG	2.7
53	B5	130	ARG	2.7
53	B5	211	ARG	2.7
7	AG	88	PRO	2.7
8	CH	55	THR	2.7
13	CM	99	GLY	2.7
29	DH	79	THR	2.7
39	DR	50	GLY	2.7
51	D3	17	THR	2.7
22	DA	34	U	2.7
22	DA	276	U	2.7
53	B5	188	ASP	2.7
2	AB	221	VAL	2.7
29	DH	87	GLU	2.7
35	DN	60	VAL	2.7
45	DX	4	VAL	2.7
13	CM	19	LEU	2.7
19	CS	38	SER	2.7
26	DE	93	SER	2.7
37	DP	97	LEU	2.7
42	DU	44	LYS	2.6
9	CI	121	ALA	2.6
29	DH	52	ALA	2.6
30	DI	115	ALA	2.6
51	D3	65	ALA	2.6
1	AA	844	G	2.6
22	BA	2120	G	2.6
53	B5	67	HIS	2.6
20	AT	36	TYR	2.6
44	DW	39	ARG	2.6
53	B5	165	ARG	2.6
1	CA	948	C	2.6
22	BA	1092	C	2.6
22	BA	2096	C	2.6
14	CN	52	PRO	2.6
33	DL	8	PRO	2.6
53	B5	66	PRO	2.6
8	AH	76	GLN	2.6
14	AN	34	VAL	2.6
14	CN	19	LYS	2.6
22	BA	2132	U	2.6
26	DE	98	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
33	DL	29	LYS	2.6
35	DN	48	VAL	2.6
37	DP	9	GLU	2.6
45	DX	30	LEU	2.6
1	CA	1492	A	2.6
22	DA	330	A	2.6
3	CC	180	ALA	2.6
9	CI	14	SER	2.6
13	CM	30	SER	2.6
36	DO	14	ALA	2.6
50	D2	23	ALA	2.6
1	CA	1020	G	2.6
6	CF	79	ARG	2.6
13	CM	93	ARG	2.6
22	DA	51	G	2.6
22	DA	389	G	2.6
30	BI	134	ARG	2.6
53	B5	94	TYR	2.6
53	B5	147	GLY	2.6
35	DN	36	THR	2.6
36	DO	17	LYS	2.6
45	DX	48	THR	2.6
14	CN	45	VAL	2.6
22	DA	267	C	2.6
22	DA	268	C	2.6
26	DE	138	LEU	2.6
27	DF	117	LEU	2.6
28	DG	23	VAL	2.6
40	DS	45	VAL	2.6
53	B5	189	ASN	2.6
7	CG	42	ILE	2.6
9	CI	37	GLN	2.6
17	AQ	9	GLN	2.6
33	DL	73	ILE	2.6
26	BE	7	ASP	2.6
35	DN	1	MET	2.6
36	DO	2	ASP	2.6
39	DR	55	ASP	2.6
51	D3	54	ASP	2.6
12	CL	2	ALA	2.6
13	CM	32	ALA	2.6
26	DE	172	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
35	DN	102	PHE	2.6
1	CA	65	A	2.6
1	CA	1145	A	2.6
22	BA	2108	A	2.6
26	DE	69	ARG	2.6
31	DJ	95	ARG	2.6
40	BS	110	ARG	2.6
35	DN	84	GLY	2.6
7	CG	149	LYS	2.6
24	DC	39	LYS	2.6
1	AA	993	G	2.6
5	AE	11	LEU	2.6
7	CG	38	THR	2.6
14	CN	16	LEU	2.6
6	CF	16	GLU	2.6
14	CN	30	ILE	2.6
22	BA	2128	G	2.6
22	DA	289	G	2.6
22	DA	1382	G	2.6
22	DA	2124	G	2.6
24	DC	252	THR	2.6
25	DD	107	VAL	2.6
30	BI	138	LEU	2.6
26	DE	77	ILE	2.6
30	BI	129	ILE	2.6
42	DU	49	VAL	2.6
44	DW	38	VAL	2.6
30	DI	105	GLN	2.6
51	D3	49	MET	2.6
7	AG	98	ALA	2.6
28	DG	150	ALA	2.6
29	DH	46	PHE	2.6
28	BG	166	ASP	2.6
33	DL	72	ALA	2.6
44	DW	79	PHE	2.6
1	AA	1001	C	2.6
19	CS	12	ASP	2.6
22	BA	846	U	2.6
22	DA	193	U	2.6
22	DA	2011	U	2.6
14	AN	55	SER	2.6
20	AT	6	SER	2.6

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Mol	Chain	Res	Type	RSRZ
29	DH	93	SER	2.6
19	AS	55	ARG	2.6
9	CI	100	LYS	2.6
27	DF	83	TYR	2.6
31	DJ	74	TYR	2.6
33	DL	26	GLY	2.6
33	DL	114	GLY	2.6
2	CB	114	LEU	2.6
10	CJ	52	LEU	2.6
33	DL	57	LEU	2.6
6	CF	10	VAL	2.6
14	CN	82	ILE	2.6
19	CS	11	ILE	2.6
21	AU	32	VAL	2.6
25	DD	170	VAL	2.6
30	DI	122	ILE	2.6
37	DP	73	VAL	2.6
42	DU	25	VAL	2.6
49	D1	5	ILE	2.6
26	DE	115	GLN	2.6
38	DQ	44	GLN	2.6
42	DU	37	GLU	2.6
50	D2	6	GLN	2.6
7	CG	148	ASN	2.6
16	AP	16	PHE	2.6
17	AQ	82	ALA	2.6
27	DF	2	ALA	2.6
29	BH	49	ALA	2.6
30	DI	44	ALA	2.6
22	DA	277	G	2.5
22	BA	1083	U	2.5
42	DU	22	ARG	2.5
23	DB	17	C	2.5
35	DN	119	SER	2.5
40	DS	81	SER	2.5
48	D0	34	SER	2.5
28	DG	175	LYS	2.5
38	DQ	41	LYS	2.5
53	B5	19	LYS	2.5
53	B5	80	LYS	2.5
3	AC	167	TRP	2.5
22	BA	2117	A	2.5

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Mol	Chain	Res	Type	RSRZ
9	CI	117	GLY	2.5
30	BI	91	GLY	2.5
33	DL	28	GLY	2.5
2	AB	136	MET	2.5
37	DP	50	ILE	2.5
42	DU	13	VAL	2.5
6	AF	92	THR	2.5
19	CS	65	GLU	2.5
26	DE	155	GLU	2.5
26	DE	85	PHE	2.5
42	DU	46	GLN	2.5
9	AI	44	ALA	2.5
29	BH	64	ALA	2.5
41	BT	92	ASN	2.5
17	CQ	11	ARG	2.5
25	DD	77	ARG	2.5
28	DG	45	HIS	2.5
30	BI	116	ASP	2.5
35	DN	46	ARG	2.5
46	DY	29	ARG	2.5
1	CA	1240	U	2.5
2	CB	11	LYS	2.5
22	BA	2151	U	2.5
1	AA	86	G	2.5
22	DA	214	G	2.5
22	DA	1303	G	2.5
22	DA	2112	G	2.5
22	DA	2410	G	2.5
23	DB	41	G	2.5
1	CA	1303	C	2.5
22	DA	343	C	2.5
2	CB	43	LEU	2.5
7	CG	118	LEU	2.5
9	CI	125	PRO	2.5
19	CS	59	PRO	2.5
24	DC	248	TRP	2.5
25	DD	187	LEU	2.5
30	BI	85	GLY	2.5
2	CB	207	ILE	2.5
6	CF	89	VAL	2.5
17	CQ	21	ILE	2.5
28	DG	169	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
30	DI	70	VAL	2.5
53	B5	20	VAL	2.5
22	BA	2170	A	2.5
22	DA	1237	A	2.5
9	CI	84	THR	2.5
19	CS	77	THR	2.5
27	DF	20	PHE	2.5
30	BI	67	PHE	2.5
30	DI	46	THR	2.5
40	DS	37	THR	2.5
16	AP	82	ALA	2.5
20	CT	7	ALA	2.5
30	DI	18	ALA	2.5
30	DI	104	ALA	2.5
39	DR	103	ALA	2.5
9	AI	11	ARG	2.5
13	CM	107	ARG	2.5
17	CQ	40	ARG	2.5
10	CJ	91	ASP	2.5
17	AQ	16	LYS	2.5
30	BI	45	LYS	2.5
30	BI	72	LYS	2.5
40	DS	83	LYS	2.5
50	D2	25	LYS	2.5
1	AA	1008	U	2.5
3	CC	154	SER	2.5
6	CF	100	SER	2.5
20	CT	6	SER	2.5
46	DY	40	SER	2.5
14	AN	48	LEU	2.5
28	DG	12	PRO	2.5
27	DF	62	GLY	2.5
29	BH	13	GLY	2.5
30	BI	17	MET	2.5
30	BI	26	PRO	2.5
31	DJ	118	MET	2.5
36	DO	48	LEU	2.5
44	DW	74	PRO	2.5
53	B5	128	LEU	2.5
17	CQ	61	ILE	2.5
24	DC	47	GLY	2.5
41	DT	71	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
48	D0	35	GLY	2.5
3	CC	195	VAL	2.5
9	AI	111	VAL	2.5
53	B5	42	VAL	2.5
1	AA	211	G	2.5
22	DA	1225	G	2.5
22	DA	2697	G	2.5
24	DC	83	TYR	2.5
7	CG	18	PHE	2.5
10	CJ	44	THR	2.5
32	DK	112	PHE	2.5
26	DE	86	ALA	2.5
27	DF	172	ALA	2.5
1	CA	1150	A	2.5
9	CI	11	ARG	2.5
22	BA	715	A	2.5
22	DA	73	A	2.5
22	DA	2406	A	2.5
31	DJ	96	ARG	2.5
25	DD	154	LYS	2.5
53	B5	201	LYS	2.5
26	DE	200	LEU	2.5
29	DH	12	LEU	2.5
35	DN	51	LEU	2.5
41	DT	1	MET	2.5
41	DT	32	LEU	2.5
53	B5	186	LEU	2.5
2	CB	33	GLY	2.5
11	AK	43	GLY	2.5
30	BI	135	SER	2.5
53	B5	55	SER	2.5
22	DA	50	U	2.5
22	DA	290	U	2.5
53	B5	91	GLY	2.5
13	CM	25	VAL	2.5
29	BH	3	VAL	2.5
29	BH	138	VAL	2.5
49	D1	47	VAL	2.5
17	CQ	37	PHE	2.5
21	CU	8	GLU	2.5
49	D1	39	PHE	2.5
3	CC	164	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
7	CG	39	ALA	2.5
21	CU	52	ALA	2.5
26	DE	48	THR	2.5
30	BI	84	ALA	2.5
36	DO	19	GLN	2.5
40	DS	14	ALA	2.5
40	DS	92	ARG	2.5
42	DU	2	ALA	2.5
44	DW	41	ARG	2.5
50	D2	12	ARG	2.5
1	CA	135	C	2.5
20	AT	64	LYS	2.5
22	DA	565	C	2.5
48	D0	9	THR	2.5
25	DD	62	LYS	2.5
42	DU	19	LYS	2.5
46	BY	4	LYS	2.5
52	D4	32	LYS	2.5
53	B5	85	LYS	2.5
22	DA	805	G	2.5
1	CA	1201	A	2.5
22	DA	631	A	2.5
53	B5	200	HIS	2.5
19	CS	47	LEU	2.4
25	DD	131	ASP	2.4
35	DN	38	LEU	2.4
31	DJ	8	PRO	2.4
5	CE	109	GLY	2.4
9	CI	111	VAL	2.4
12	CL	8	VAL	2.4
13	CM	111	GLY	2.4
16	CP	2	VAL	2.4
30	DI	89	GLY	2.4
37	DP	67	GLY	2.4
39	DR	57	GLY	2.4
42	DU	32	GLY	2.4
16	CP	24	SER	2.4
19	CS	4	SER	2.4
28	DG	153	ARG	2.4
29	DH	97	ARG	2.4
29	DH	139	PHE	2.4
35	DN	80	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
39	DR	78	ARG	2.4
2	CB	152	LYS	2.4
30	BI	44	ALA	2.4
37	DP	98	TYR	2.4
44	DW	62	LYS	2.4
49	D1	38	LYS	2.4
24	DC	223	THR	2.4
25	DD	25	THR	2.4
36	DO	24	THR	2.4
30	BI	117	MET	2.4
50	D2	13	ASN	2.4
10	AJ	87	LEU	2.4
22	BA	1847	A	2.4
1	CA	993	G	2.4
9	CI	23	PRO	2.4
22	DA	88	G	2.4
22	DA	974	G	2.4
22	DA	1332	G	2.4
25	DD	23	PRO	2.4
27	DF	44	ILE	2.4
39	DR	49	ILE	2.4
10	CJ	74	VAL	2.4
17	CQ	79	VAL	2.4
29	DH	31	VAL	2.4
15	CO	2	SER	2.4
17	CQ	20	SER	2.4
27	DF	30	ARG	2.4
30	BI	128	SER	2.4
50	D2	45	SER	2.4
53	B5	155	ARG	2.4
53	B5	195	ARG	2.4
1	CA	1049	U	2.4
9	AI	20	PHE	2.4
30	DI	67	PHE	2.4
41	DT	49	LYS	2.4
7	AG	147	ALA	2.4
7	CG	61	ALA	2.4
10	CJ	93	ALA	2.4
16	CP	27	ALA	2.4
28	DG	63	ALA	2.4
27	DF	18	THR	2.4
40	DS	39	THR	2.4

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Mol	Chain	Res	Type	RSRZ
44	DW	58	THR	2.4
48	D0	26	THR	2.4
7	CG	23	LEU	2.4
13	AM	80	LEU	2.4
41	DT	7	LEU	2.4
49	D1	11	LEU	2.4
53	B5	197	LEU	2.4
13	CM	4	ILE	2.4
1	CA	940	C	2.4
19	AS	30	PRO	2.4
27	DF	137	ILE	2.4
32	DK	2	ILE	2.4
53	B5	190	ILE	2.4
2	CB	163	VAL	2.4
3	CC	155	GLY	2.4
13	CM	6	GLY	2.4
27	DF	31	VAL	2.4
29	BH	61	VAL	2.4
29	BH	92	GLY	2.4
29	BH	98	ASP	2.4
42	DU	59	VAL	2.4
7	AG	110	LYS	2.4
7	CG	109	ARG	2.4
9	CI	114	LYS	2.4
9	CI	120	LYS	2.4
14	CN	47	LYS	2.4
25	DD	8	LYS	2.4
33	DL	18	ARG	2.4
33	DL	70	LYS	2.4
42	DU	79	LYS	2.4
1	CA	82	G	2.4
1	CA	1047	G	2.4
1	CA	1297	G	2.4
8	CH	60	GLU	2.4
22	DA	553	G	2.4
22	DA	664	G	2.4
22	DA	799	G	2.4
25	DD	137	SER	2.4
27	DF	73	SER	2.4
29	BH	136	SER	2.4
29	DH	131	SER	2.4
30	DI	102	SER	2.4

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Mol	Chain	Res	Type	RSRZ
33	DL	144	GLU	2.4
7	CG	65	ALA	2.4
25	DD	125	TRP	2.4
26	DE	68	ALA	2.4
29	DH	26	ALA	2.4
30	BI	62	TYR	2.4
53	B5	41	THR	2.4
14	CN	6	MET	2.4
30	DI	125	MET	2.4
53	B5	210	LEU	2.4
49	D1	9	ILE	2.4
7	CG	80	VAL	2.4
9	AI	19	VAL	2.4
9	CI	29	VAL	2.4
12	CL	88	LYS	2.4
19	CS	72	GLY	2.4
24	DC	41	GLY	2.4
29	DH	115	VAL	2.4
45	DX	7	VAL	2.4
35	DN	8	ARG	2.4
39	DR	97	LYS	2.4
45	DX	57	ARG	2.4
51	D3	52	LYS	2.4
53	B5	133	GLY	2.4
26	DE	49	ARG	2.4
29	BH	101	ASP	2.4
53	B5	93	ASP	2.4
22	DA	1049	C	2.4
1	CA	1362	A	2.4
10	CJ	49	PHE	2.4
5	AE	65	GLU	2.4
22	DA	1365	A	2.4
28	DG	52	PHE	2.4
30	DI	69	PHE	2.4
8	AH	130	ALA	2.4
14	CN	36	ALA	2.4
19	CS	75	ALA	2.4
25	DD	132	ALA	2.4
26	DE	50	ALA	2.4
40	DS	44	ALA	2.4
1	CA	219	U	2.4
1	CA	632	U	2.4

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Mol	Chain	Res	Type	RSRZ
1	CA	988	G	2.4
9	AI	6	TYR	2.4
22	BA	2131	U	2.4
22	DA	113	U	2.4
22	DA	215	G	2.4
22	DA	524	G	2.4
22	DA	583	G	2.4
33	DL	74	THR	2.4
37	DP	104	THR	2.4
40	DS	86	MET	2.4
2	CB	101	LEU	2.4
33	DL	82	LEU	2.4
40	DS	33	LEU	2.4
9	CI	21	ILE	2.4
42	DU	103	ILE	2.4
2	AB	131	LYS	2.3
4	CD	47	ARG	2.3
5	AE	102	GLY	2.3
9	CI	18	ARG	2.3
25	DD	59	ARG	2.3
29	DH	108	VAL	2.3
30	DI	61	VAL	2.3
45	BX	17	ASN	2.3
49	D1	37	LYS	2.3
53	B5	142	LYS	2.3
29	DH	120	GLY	2.3
14	CN	54	ASP	2.3
19	AS	74	PHE	2.3
31	DJ	49	ASP	2.3
16	AP	22	ALA	2.3
30	BI	110	ALA	2.3
31	BJ	9	GLU	2.3
38	DQ	12	ALA	2.3
38	DQ	21	ALA	2.3
41	DT	46	ALA	2.3
46	DY	61	ALA	2.3
22	BA	1100	C	2.3
1	CA	1493	A	2.3
2	CB	104	TRP	2.3
22	DA	340	A	2.3
24	DC	225	MET	2.3
30	BI	136	MET	2.3

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Mol	Chain	Res	Type	RSRZ
30	DI	128	SER	2.3
42	DU	30	SER	2.3
52	D4	1	MET	2.3
7	CG	44	TYR	2.3
9	AI	90	TYR	2.3
26	DE	150	THR	2.3
30	BI	73	THR	2.3
36	DO	64	TYR	2.3
41	DT	70	HIS	2.3
53	B5	65	LEU	2.3
1	CA	1364	U	2.3
22	BA	790	U	2.3
22	BA	2105	U	2.3
29	DH	72	ILE	2.3
30	BI	59	ILE	2.3
19	CS	17	LYS	2.3
20	AT	69	LYS	2.3
31	DJ	106	LYS	2.3
35	DN	40	LYS	2.3
53	B5	185	LYS	2.3
1	AA	1305	G	2.3
1	CA	202	G	2.3
1	CA	1220	G	2.3
9	CI	47	VAL	2.3
11	AK	13	ARG	2.3
22	BA	1179	G	2.3
22	DA	1645	G	2.3
24	DC	245	VAL	2.3
4	AD	24	GLY	2.3
7	CG	8	GLY	2.3
26	DE	71	GLY	2.3
30	DI	99	GLY	2.3
2	CB	90	PHE	2.3
6	CF	80	PHE	2.3
7	AG	151	PHE	2.3
33	DL	50	PHE	2.3
45	DX	46	PHE	2.3
10	AJ	34	ALA	2.3
13	CM	15	ALA	2.3
13	CM	35	ALA	2.3
13	CM	61	ALA	2.3
30	BI	76	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
7	CG	22	LEU	2.3
14	CN	74	LEU	2.3
26	DE	133	LEU	2.3
49	D1	34	LEU	2.3
2	CB	23	TRP	2.3
26	DE	60	TRP	2.3
15	AO	22	THR	2.3
22	DA	672	C	2.3
22	DA	1764	C	2.3
22	DA	2896	C	2.3
1	CA	109	A	2.3
1	CA	1446	A	2.3
13	AM	4	ILE	2.3
25	DD	129	THR	2.3
22	BA	1088	A	2.3
22	DA	670	A	2.3
24	DC	28	LYS	2.3
24	DC	59	LYS	2.3
30	DI	113	LYS	2.3
34	DM	8	LYS	2.3
46	DY	54	LYS	2.3
19	AS	3	ARG	2.3
22	DA	2109	U	2.3
29	DH	116	ARG	2.3
31	DJ	116	ARG	2.3
41	DT	69	ARG	2.3
4	CD	143	VAL	2.3
7	AG	105	VAL	2.3
41	DT	31	VAL	2.3
17	CQ	56	GLY	2.3
19	CS	8	GLY	2.3
30	BI	119	GLY	2.3
33	DL	11	GLY	2.3
53	B5	49	GLY	2.3
30	BI	42	PHE	2.3
51	D3	14	PHE	2.3
2	CB	34	ALA	2.3
22	BA	1071	G	2.3
22	DA	45	G	2.3
22	DA	60	G	2.3
22	DA	1238	G	2.3
22	DA	1407	G	2.3

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Mol	Chain	Res	Type	RSRZ
29	DH	49	ALA	2.3
53	B5	196	ALA	2.3
11	AK	18	ASP	2.3
12	CL	7	LEU	2.3
26	DE	143	LEU	2.3
29	BH	75	LEU	2.3
34	DM	60	GLN	2.3
2	AB	170	HIS	2.3
6	CF	93	LYS	2.3
7	AG	25	LYS	2.3
20	CT	9	LYS	2.3
24	DC	255	LYS	2.3
27	DF	67	ILE	2.3
29	BH	128	HIS	2.3
48	D0	19	HIS	2.3
53	B5	158	LYS	2.3
2	CB	225	ARG	2.3
39	DR	79	ARG	2.3
50	D2	35	ARG	2.3
52	D4	36	ARG	2.3
9	AI	51	PRO	2.3
1	AA	87	C	2.3
1	AA	532	A	2.3
1	AA	994	A	2.3
1	AA	1014	A	2.3
1	CA	978	A	2.3
1	CA	985	C	2.3
1	CA	1028	C	2.3
6	AF	60	VAL	2.3
22	DA	654	A	2.3
22	DA	1536	C	2.3
27	DF	13	VAL	2.3
32	DK	103	VAL	2.3
40	DS	20	VAL	2.3
22	DA	665	U	2.3
22	DA	931	U	2.3
7	AG	8	GLY	2.3
24	BC	241	GLY	2.3
25	DD	87	GLY	2.3
30	DI	85	GLY	2.3
3	AC	37	PHE	2.3
28	DG	136	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
40	DS	82	MET	2.3
41	DT	45	ALA	2.3
42	DU	64	ALA	2.3
47	DZ	13	ALA	2.3
53	B5	156	GLU	2.3
4	CD	152	GLN	2.3
26	DE	41	GLN	2.3
28	DG	105	LEU	2.3
7	CG	17	LYS	2.3
27	BF	72	LYS	2.3
1	CA	203	G	2.3
8	CH	75	ILE	2.3
13	CM	39	ILE	2.3
19	CS	40	ILE	2.3
22	BA	1922	G	2.3
22	BA	2110	G	2.3
22	DA	93	G	2.3
22	DA	468	G	2.3
22	DA	1068	G	2.3
25	DD	96	ILE	2.3
29	DH	128	HIS	2.3
32	DK	29	HIS	2.3
40	DS	102	HIS	2.3
13	CM	28	THR	2.3
14	CN	53	ARG	2.3
26	DE	72	SER	2.3
26	DE	79	ARG	2.3
28	DG	69	ARG	2.3
39	DR	80	ARG	2.3
51	D3	30	ARG	2.3
4	CD	76	TYR	2.3
5	AE	50	TYR	2.3
38	DQ	32	TYR	2.3
24	DC	250	VAL	2.3
41	DT	85	VAL	2.3
2	CB	224	GLY	2.3
25	DD	163	GLY	2.3
29	BH	95	GLY	2.3
30	BI	99	GLY	2.3
49	B1	4	GLY	2.3
22	DA	810	U	2.3
1	CA	995	C	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1021	A	2.2
1	CA	1533	C	2.2
22	DA	130	C	2.2
22	DA	477	A	2.2
16	CP	81	ALA	2.2
19	CS	50	ALA	2.2
28	DG	5	ALA	2.2
29	DH	119	ASN	2.2
30	BI	7	ALA	2.2
30	BI	41	ALA	2.2
30	BI	120	ALA	2.2
53	B5	174	ALA	2.2
6	CF	54	LEU	2.2
7	AG	23	LEU	2.2
11	CK	42	LEU	2.2
13	AM	19	LEU	2.2
20	CT	86	LEU	2.2
24	DC	33	LEU	2.2
27	DF	16	LEU	2.2
34	DM	2	LEU	2.2
19	CS	18	LYS	2.2
29	DH	86	ASP	2.2
20	CT	24	ARG	2.2
27	DF	71	ARG	2.2
52	D4	12	ARG	2.2
14	CN	42	TRP	2.2
30	BI	126	THR	2.2
8	CH	110	VAL	2.2
11	AK	129	VAL	2.2
25	DD	26	VAL	2.2
27	DF	40	VAL	2.2
28	DG	15	VAL	2.2
30	DI	57	VAL	2.2
2	AB	213	TYR	2.2
3	CC	168	TYR	2.2
13	CM	23	TYR	2.2
24	DC	103	TYR	2.2
1	CA	1222	G	2.2
22	BA	1063	G	2.2
22	BA	1074	G	2.2
22	DA	467	G	2.2
22	DA	1430	G	2.2

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Mol	Chain	Res	Type	RSRZ
22	DA	2642	G	2.2
11	AK	19	GLY	2.2
50	D2	27	GLY	2.2
53	B5	125	GLY	2.2
1	CA	1307	U	2.2
22	DA	2151	U	2.2
22	DA	2833	U	2.2
10	AJ	10	LEU	2.2
14	AN	26	GLU	2.2
26	DE	118	LEU	2.2
53	B5	198	GLU	2.2
12	CL	15	LYS	2.2
16	CP	80	LYS	2.2
20	CT	5	LYS	2.2
20	CT	70	ASN	2.2
22	BA	1069	A	2.2
22	BA	1089	A	2.2
22	DA	505	A	2.2
22	DA	1092	C	2.2
26	DE	139	LYS	2.2
28	DG	86	LYS	2.2
29	BH	8	LYS	2.2
32	DK	111	LYS	2.2
51	D3	41	LYS	2.2
2	AB	67	ILE	2.2
9	AI	83	ILE	2.2
9	CI	126	GLN	2.2
10	CJ	8	ILE	2.2
29	BH	133	GLN	2.2
32	DK	3	GLN	2.2
28	DG	16	ASP	2.2
40	DS	95	ARG	2.2
50	D2	21	ARG	2.2
7	CG	141	VAL	2.2
12	CL	40	THR	2.2
19	CS	23	VAL	2.2
24	DC	213	TRP	2.2
34	DM	7	THR	2.2
37	DP	92	VAL	2.2
53	B5	108	TRP	2.2
33	DL	42	SER	2.2
44	DW	28	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
53	B5	61	GLY	2.2
30	DI	17	MET	2.2
53	B5	209	PHE	2.2
14	CN	98	LYS	2.2
20	CT	85	LYS	2.2
21	AU	25	LYS	2.2
1	AA	79	G	2.2
1	CA	1241	G	2.2
2	AB	135	LEU	2.2
3	CC	157	LEU	2.2
10	AJ	52	LEU	2.2
10	AJ	59	LYS	2.2
25	DD	75	ALA	2.2
29	BH	109	GLU	2.2
29	DH	55	GLU	2.2
30	DI	120	ALA	2.2
33	DL	83	ALA	2.2
39	DR	34	GLU	2.2
40	DS	23	LEU	2.2
41	DT	19	LYS	2.2
44	DW	72	LYS	2.2
10	CJ	47	GLU	2.2
22	DA	205	G	2.2
24	DC	82	GLU	2.2
53	B5	48	LEU	2.2
1	CA	1224	U	2.2
22	BA	1065	U	2.2
22	BA	2167	U	2.2
22	DA	1375	U	2.2
22	DA	2797	U	2.2
12	AL	73	ASN	2.2
3	AC	136	ARG	2.2
12	CL	86	ARG	2.2
13	AM	3	ARG	2.2
17	CQ	5	ILE	2.2
19	CS	45	ILE	2.2
26	DE	30	GLN	2.2
29	BH	116	ARG	2.2
33	DL	21	ARG	2.2
22	DA	1772	A	2.2
22	DA	2309	A	2.2
1	CA	972	C	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1325	C	2.2
22	DA	33	C	2.2
22	DA	115	C	2.2
22	DA	228	C	2.2
22	DA	353	C	2.2
22	DA	673	C	2.2
28	DG	137	ASP	2.2
19	CS	30	PRO	2.2
28	DG	112	PRO	2.2
29	DH	134	VAL	2.2
13	CM	102	THR	2.2
33	DL	67	THR	2.2
33	DL	118	THR	2.2
2	AB	13	GLY	2.2
33	DL	58	TYR	2.2
38	DQ	25	TYR	2.2
4	CD	45	LYS	2.2
14	AN	19	LYS	2.2
19	CS	70	LYS	2.2
27	DF	64	LYS	2.2
31	BJ	111	LYS	2.2
41	DT	66	LYS	2.2
48	D0	39	LEU	2.2
24	DC	210	ALA	2.2
53	B5	184	GLU	2.2
7	AG	7	ILE	2.2
10	AJ	100	ILE	2.2
10	CJ	53	ILE	2.2
17	CQ	38	ILE	2.2
1	CA	1126	U	2.2
19	CS	43	ASN	2.2
22	BA	2180	U	2.2
24	DC	203	ARG	2.2
33	DL	126	ARG	2.2
51	D3	42	ARG	2.2
26	DE	46	GLN	2.2
30	DI	34	ASN	2.2
1	AA	987	G	2.2
1	AA	1353	G	2.2
22	BA	1068	G	2.2
22	DA	2156	G	2.2
1	AA	996	A	2.2

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Mol	Chain	Res	Type	RSRZ
7	AG	69	VAL	2.2
22	BA	613	A	2.2
22	DA	311	A	2.2
22	DA	482	A	2.2
22	DA	1077	A	2.2
24	DC	19	VAL	2.2
32	DK	122	VAL	2.2
39	DR	52	PRO	2.2
1	CA	1369	C	2.2
22	DA	57	C	2.2
22	DA	1117	C	2.2
23	DB	3	C	2.2
9	CI	9	THR	2.2
9	CI	43	THR	2.2
5	AE	159	LYS	2.2
7	AG	112	GLY	2.2
9	CI	129	LYS	2.2
30	BI	10	LYS	2.2
51	D3	47	LYS	2.2
4	AD	2	ALA	2.2
42	DU	62	GLU	2.2
42	DU	63	ALA	2.2
46	DY	13	GLU	2.2
9	AI	130	ARG	2.1
10	AJ	45	ARG	2.1
13	CM	77	ILE	2.1
35	DN	96	ARG	2.1
38	DQ	3	ARG	2.1
50	D2	14	ARG	2.1
53	B5	153	ILE	2.1
29	DH	2	GLN	2.1
40	DS	15	GLN	2.1
1	AA	1286	U	2.1
9	CI	31	ASN	2.1
22	DA	1406	U	2.1
22	DA	2118	U	2.1
5	CE	123	VAL	2.1
13	AM	10	PRO	2.1
26	DE	169	VAL	2.1
30	BI	98	VAL	2.1
52	D4	31	PRO	2.1
27	DF	130	MET	2.1

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Mol	Chain	Res	Type	RSRZ
29	BH	7	ASP	2.1
53	B5	167	ASP	2.1
1	AA	1003	G	2.1
2	CB	45	LYS	2.1
17	CQ	39	LYS	2.1
5	AE	104	GLY	2.1
22	BA	654	A	2.1
22	BA	1073	A	2.1
22	BA	1090	A	2.1
22	BA	2115	G	2.1
22	BA	2133	G	2.1
22	DA	30	G	2.1
22	DA	1364	G	2.1
22	DA	1652	A	2.1
22	DA	1701	A	2.1
22	DA	2211	A	2.1
22	DA	2599	G	2.1
27	DF	72	LYS	2.1
29	DH	8	LYS	2.1
29	DH	24	GLY	2.1
29	DH	40	THR	2.1
29	DH	124	THR	2.1
30	BI	113	LYS	2.1
30	DI	45	LYS	2.1
30	DI	72	LYS	2.1
46	BY	62	GLY	2.1
50	D2	4	THR	2.1
15	AO	31	LEU	2.1
9	CI	90	TYR	2.1
22	DA	1072	C	2.1
27	DF	100	PHE	2.1
31	DJ	109	LEU	2.1
27	DF	8	TYR	2.1
7	CG	41	SER	2.1
10	CJ	34	ALA	2.1
13	CM	46	SER	2.1
14	CN	32	SER	2.1
17	CQ	24	ALA	2.1
25	DD	196	ALA	2.1
29	BH	36	ALA	2.1
30	DI	66	SER	2.1
33	DL	75	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
35	DN	15	SER	2.1
43	DV	58	SER	2.1
3	CC	127	ARG	2.1
29	BH	129	GLU	2.1
29	BH	149	GLU	2.1
31	DJ	120	ARG	2.1
33	DL	78	ARG	2.1
40	DS	11	ARG	2.1
33	DL	77	ILE	2.1
45	DX	34	HIS	2.1
1	AA	991	U	2.1
2	AB	158	PRO	2.1
7	CG	32	VAL	2.1
13	CM	64	VAL	2.1
22	BA	2122	U	2.1
22	DA	328	U	2.1
22	DA	1599	U	2.1
22	DA	2903	U	2.1
25	DD	24	VAL	2.1
28	DG	156	PRO	2.1
24	DC	256	LYS	2.1
26	DE	185	LYS	2.1
40	DS	98	LYS	2.1
13	CM	68	ASP	2.1
16	CP	23	ASP	2.1
30	BI	131	GLY	2.1
35	DN	57	THR	2.1
2	AB	129	LEU	2.1
2	CB	50	PHE	2.1
9	CI	39	PHE	2.1
13	CM	34	LEU	2.1
33	DL	64	PHE	2.1
36	DO	18	LEU	2.1
1	CA	101	A	2.1
1	CA	1019	A	2.1
1	CA	1332	A	2.1
10	AJ	89	ARG	2.1
13	CM	90	ARG	2.1
22	DA	342	A	2.1
22	DA	666	A	2.1
22	DA	1247	A	2.1
24	DC	217	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
29	DH	102	ALA	2.1
30	DI	84	ALA	2.1
31	DJ	37	ARG	2.1
35	DN	2	ARG	2.1
51	D3	60	ALA	2.1
1	CA	1221	G	2.1
7	CG	106	GLU	2.1
11	CK	107	ILE	2.1
16	CP	44	SER	2.1
19	AS	49	ILE	2.1
22	DA	7	G	2.1
22	DA	338	G	2.1
22	DA	1721	G	2.1
22	DA	2069	G	2.1
22	DA	2414	G	2.1
42	DU	68	SER	2.1
47	DZ	48	ILE	2.1
22	BA	143	C	2.1
22	DA	22	C	2.1
35	DN	3	HIS	2.1
7	CG	69	VAL	2.1
10	AJ	74	VAL	2.1
21	CU	28	VAL	2.1
29	BH	19	VAL	2.1
9	CI	51	PRO	2.1
10	CJ	79	PRO	2.1
19	CS	42	PRO	2.1
29	DH	141	LYS	2.1
30	BI	93	PRO	2.1
38	DQ	5	LYS	2.1
44	DW	76	ASN	2.1
45	DX	54	LYS	2.1
22	BA	1060	U	2.1
22	BA	2118	U	2.1
2	AB	88	ASP	2.1
10	AJ	90	LEU	2.1
17	CQ	8	LEU	2.1
21	AU	29	LEU	2.1
24	DC	159	GLY	2.1
27	BF	117	LEU	2.1
29	DH	122	LEU	2.1
46	DY	37	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
46	DY	49	ASP	2.1
53	B5	204	GLY	2.1
3	CC	44	THR	2.1
27	DF	35	THR	2.1
29	DH	125	THR	2.1
41	DT	22	THR	2.1
35	DN	30	ARG	2.1
9	AI	21	ILE	2.1
10	CJ	40	ILE	2.1
13	CM	41	GLU	2.1
17	AQ	21	ILE	2.1
27	DF	43	ALA	2.1
27	DF	106	ILE	2.1
28	DG	7	ALA	2.1
28	DG	40	ALA	2.1
32	DK	119	ALA	2.1
35	DN	77	ALA	2.1
38	DQ	17	ILE	2.1
53	B5	101	ILE	2.1
2	CB	191	SER	2.1
22	DA	504	A	2.1
17	CQ	9	GLN	2.1
46	DY	25	GLN	2.1
19	CS	52	HIS	2.1
20	AT	20	HIS	2.1
1	CA	941	G	2.1
1	CA	1322	C	2.1
2	AB	154	MET	2.1
8	AH	3	MET	2.1
2	CB	187	VAL	2.1
3	AC	39	VAL	2.1
7	AG	11	LYS	2.1
30	DI	100	LYS	2.1
50	D2	37	LYS	2.1
53	B5	173	HIS	2.1
9	CI	58	VAL	2.1
22	DA	107	G	2.1
22	DA	880	G	2.1
22	DA	1171	G	2.1
22	DA	2127	G	2.1
41	DT	63	VAL	2.1
53	B5	182	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
25	DD	185	ASN	2.1
35	DN	13	ASN	2.1
2	CB	54	LEU	2.1
8	CH	63	LEU	2.1
27	DF	36	LEU	2.1
28	DG	50	LEU	2.1
30	BI	28	LEU	2.1
47	DZ	24	LEU	2.1
1	CA	209	U	2.1
22	BA	1101	U	2.1
22	DA	72	U	2.1
22	DA	349	U	2.1
38	DQ	36	PHE	2.1
36	DO	65	THR	2.1
12	CL	17	ALA	2.1
24	BC	213	TRP	2.1
25	DD	14	ILE	2.1
7	CG	129	GLU	2.1
16	AP	47	GLU	2.1
3	CC	62	LYS	2.0
4	CD	23	SER	2.0
5	CE	156	LYS	2.0
7	CG	36	LYS	2.0
7	CG	57	SER	2.0
11	AK	26	SER	2.0
13	CM	81	MET	2.0
14	CN	3	LYS	2.0
37	DP	38	LYS	2.0
41	DT	78	SER	2.0
41	DT	81	LYS	2.0
48	D0	12	LYS	2.0
29	DH	135	HIS	2.0
10	CJ	84	VAL	2.0
13	AM	97	VAL	2.0
15	AO	60	VAL	2.0
17	CQ	83	VAL	2.0
22	BA	1175	A	2.0
22	BA	2097	A	2.0
22	DA	675	A	2.0
22	DA	1067	A	2.0
45	DX	47	VAL	2.0
24	DC	8	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
51	D3	2	PRO	2.0
1	AA	841	C	2.0
22	DA	209	C	2.0
22	DA	357	C	2.0
25	DD	79	LEU	2.0
26	DE	163	ASN	2.0
29	DH	145	ASN	2.0
35	DN	73	ASN	2.0
1	CA	971	G	2.0
9	AI	40	GLY	2.0
9	CI	124	ARG	2.0
12	CL	12	ARG	2.0
13	CM	38	GLY	2.0
13	CM	67	GLY	2.0
14	AN	78	GLY	2.0
22	DA	674	G	2.0
22	DA	953	G	2.0
22	DA	1271	G	2.0
22	DA	2152	G	2.0
26	DE	170	ARG	2.0
29	DH	123	ARG	2.0
42	DU	87	PHE	2.0
45	DX	28	ARG	2.0
49	D1	4	GLY	2.0
50	D2	39	ARG	2.0
2	AB	130	THR	2.0
19	CS	79	THR	2.0
22	DA	1060	U	2.0
22	DA	2111	U	2.0
28	BG	26	ILE	2.0
30	BI	101	ILE	2.0
41	DT	30	ILE	2.0
42	DU	72	ILE	2.0
47	DZ	10	THR	2.0
9	AI	16	ALA	2.0
10	CJ	60	ASP	2.0
13	AM	36	ALA	2.0
21	AU	13	ASP	2.0
24	DC	92	ALA	2.0
7	AG	139	GLU	2.0
14	AN	23	LYS	2.0
27	DF	69	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
39	DR	83	TYR	2.0
2	CB	100	MET	2.0
5	CE	152	MET	2.0
3	CC	84	VAL	2.0
7	CG	135	VAL	2.0
9	CI	104	VAL	2.0
13	CM	21	SER	2.0
24	DC	251	GLN	2.0
25	DD	60	VAL	2.0
29	DH	14	SER	2.0
30	BI	140	VAL	2.0
33	DL	12	SER	2.0
37	DP	2	SER	2.0
38	DQ	71	GLN	2.0
38	DQ	88	VAL	2.0
48	D0	3	VAL	2.0
53	B5	213	VAL	2.0
7	CG	2	PRO	2.0
27	DF	176	PRO	2.0
1	CA	1016	A	2.0
22	BA	896	A	2.0
22	DA	2800	A	2.0
29	BH	5	LEU	2.0
29	BH	12	LEU	2.0
5	CE	54	ARG	2.0
12	CL	20	ASN	2.0
13	CM	8	ASN	2.0
14	AN	35	ASN	2.0
14	CN	63	ARG	2.0
24	BC	238	ARG	2.0
24	DC	37	ASN	2.0
27	BF	148	ARG	2.0
28	DG	73	ASN	2.0
31	DJ	131	ASN	2.0
35	DN	23	ASN	2.0
46	BY	7	ARG	2.0
7	AG	132	GLY	2.0
9	CI	10	GLY	2.0
33	DL	49	GLY	2.0
51	D3	56	GLY	2.0
1	CA	984	C	2.0
1	CA	999	C	2.0

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Mol	Chain	Res	Type	RSRZ
9	CI	28	ILE	2.0
9	CI	79	ILE	2.0
22	DA	41	C	2.0
22	DA	61	C	2.0
22	DA	678	C	2.0
22	DA	2175	C	2.0
27	DF	79	ILE	2.0
47	DZ	14	ILE	2.0
4	AD	169	THR	2.0
4	CD	2	ALA	2.0
10	CJ	86	ALA	2.0
24	DC	2	ALA	2.0
24	DC	257	THR	2.0
53	B5	22	THR	2.0
53	B5	46	ALA	2.0
1	CA	1017	U	2.0
7	CG	113	ASP	2.0
8	CH	5	ASP	2.0
1	CA	86	G	2.0
1	CA	1033	G	2.0
1	CA	1255	G	2.0
1	CA	1300	G	2.0
13	CM	114	LYS	2.0
17	CQ	26	GLU	2.0
22	DA	1066	U	2.0
22	DA	1078	U	2.0
26	DE	116	ASP	2.0
22	DA	39	G	2.0
22	DA	70	G	2.0
22	DA	659	G	2.0
23	DB	16	G	2.0
26	DE	57	LYS	2.0
29	DH	127	GLU	2.0
32	DK	66	LYS	2.0
34	DM	62	LYS	2.0
35	DN	35	LYS	2.0
39	DR	73	LYS	2.0
53	B5	203	GLU	2.0
18	CR	51	TYR	2.0
32	DK	32	TYR	2.0
7	CG	89	VAL	2.0
9	AI	58	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
9	CI	48	VAL	2.0
10	CJ	26	VAL	2.0
17	CQ	29	VAL	2.0
29	BH	142	VAL	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3136	1/1	0.01	0.35	90,90,90,90	0
54	MG	DA	3134	1/1	0.12	0.39	105,105,105,105	0
54	MG	DA	3114	1/1	0.32	0.21	85,85,85,85	0
54	MG	DA	3027	1/1	0.34	0.48	98,98,98,98	0
54	MG	DA	3062	1/1	0.43	0.61	110,110,110,110	0
54	MG	AA	1659	1/1	0.43	0.56	77,77,77,77	0
54	MG	DA	3094	1/1	0.48	0.24	101,101,101,101	0
54	MG	DA	3132	1/1	0.48	0.32	93,93,93,93	0
54	MG	CA	1630	1/1	0.52	0.19	111,111,111,111	0
54	MG	DA	3061	1/1	0.55	0.26	85,85,85,85	0
54	MG	DA	3057	1/1	0.56	0.28	87,87,87,87	0
54	MG	AA	1657	1/1	0.57	0.31	68,68,68,68	0
54	MG	BA	3056	1/1	0.59	0.36	53,53,53,53	0
54	MG	DA	3120	1/1	0.60	0.27	102,102,102,102	0
54	MG	BA	3016	1/1	0.61	0.26	65,65,65,65	0
54	MG	DA	3042	1/1	0.63	0.29	64,64,64,64	0
54	MG	AA	1667	1/1	0.63	0.15	66,66,66,66	0
54	MG	DA	3078	1/1	0.63	0.27	89,89,89,89	0
54	MG	DA	3041	1/1	0.65	0.19	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3159	1/1	0.66	0.13	68,68,68,68	0
54	MG	DA	3093	1/1	0.67	0.22	108,108,108,108	0
54	MG	DA	3139	1/1	0.67	0.32	49,49,49,49	0
54	MG	CA	1636	1/1	0.67	0.16	118,118,118,118	0
54	MG	AA	1634	1/1	0.68	0.25	74,74,74,74	0
54	MG	DQ	201	1/1	0.69	0.22	53,53,53,53	0
54	MG	CA	1635	1/1	0.70	0.12	123,123,123,123	0
54	MG	DA	3045	1/1	0.72	0.15	102,102,102,102	0
54	MG	DA	3148	1/1	0.72	0.11	58,58,58,58	0
54	MG	CA	1646	1/1	0.72	0.21	66,66,66,66	0
54	MG	AA	1646	1/1	0.72	0.12	53,53,53,53	0
54	MG	CA	1644	1/1	0.73	0.21	54,54,54,54	0
54	MG	DA	3156	1/1	0.74	0.24	64,64,64,64	0
54	MG	CA	1611	1/1	0.75	0.13	85,85,85,85	0
54	MG	AA	1658	1/1	0.75	0.15	65,65,65,65	0
54	MG	DA	3033	1/1	0.76	0.28	76,76,76,76	0
54	MG	DA	3036	1/1	0.76	0.16	78,78,78,78	0
54	MG	CA	1628	1/1	0.76	0.10	99,99,99,99	0
54	MG	DA	3121	1/1	0.77	0.17	83,83,83,83	0
54	MG	DA	3059	1/1	0.77	0.19	79,79,79,79	0
54	MG	BA	3137	1/1	0.77	0.29	60,60,60,60	0
54	MG	DA	3149	1/1	0.78	0.23	63,63,63,63	0
54	MG	DA	3125	1/1	0.78	0.24	92,92,92,92	0
54	MG	DA	3009	1/1	0.78	0.24	82,82,82,82	0
54	MG	DA	3017	1/1	0.78	0.19	90,90,90,90	0
54	MG	DA	3100	1/1	0.79	0.20	83,83,83,83	0
54	MG	DA	3162	1/1	0.79	0.12	67,67,67,67	0
54	MG	DA	3072	1/1	0.79	0.14	81,81,81,81	0
54	MG	DA	3005	1/1	0.80	0.17	96,96,96,96	0
54	MG	AA	1671	1/1	0.80	0.38	56,56,56,56	0
54	MG	BA	3136	1/1	0.80	0.15	39,39,39,39	0
54	MG	DA	3113	1/1	0.80	0.11	74,74,74,74	0
54	MG	AA	1648	1/1	0.80	0.12	49,49,49,49	0
54	MG	DA	3165	1/1	0.80	0.18	56,56,56,56	0
54	MG	CA	1633	1/1	0.80	0.26	81,81,81,81	0
54	MG	DA	3096	1/1	0.81	0.12	86,86,86,86	0
54	MG	DA	3127	1/1	0.81	0.17	81,81,81,81	0
54	MG	BA	3074	1/1	0.81	0.09	22,22,22,22	0
54	MG	BA	3058	1/1	0.81	0.36	50,50,50,50	0
54	MG	DA	3153	1/1	0.81	0.35	61,61,61,61	0
54	MG	DA	3014	1/1	0.82	0.13	80,80,80,80	0
54	MG	DA	3063	1/1	0.82	0.21	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3029	1/1	0.82	0.25	74,74,74,74	0
54	MG	DA	3145	1/1	0.82	0.16	80,80,80,80	0
54	MG	DA	3138	1/1	0.83	0.28	46,46,46,46	0
54	MG	AA	1618	1/1	0.83	0.25	54,54,54,54	0
54	MG	DA	3164	1/1	0.83	0.16	67,67,67,67	0
54	MG	DA	3028	1/1	0.83	0.11	87,87,87,87	0
54	MG	DA	3146	1/1	0.83	0.09	62,62,62,62	0
54	MG	DA	3050	1/1	0.84	0.15	89,89,89,89	0
54	MG	DA	3030	1/1	0.84	0.11	70,70,70,70	0
54	MG	DA	3101	1/1	0.84	0.14	81,81,81,81	0
54	MG	DA	3161	1/1	0.84	0.11	35,35,35,35	0
54	MG	DA	3158	1/1	0.85	0.17	56,56,56,56	0
54	MG	BA	3077	1/1	0.85	0.22	74,74,74,74	0
54	MG	DA	3003	1/1	0.85	0.18	95,95,95,95	0
54	MG	BA	3147	1/1	0.85	0.26	42,42,42,42	0
54	MG	DA	3152	1/1	0.85	0.20	60,60,60,60	0
54	MG	DA	3143	1/1	0.85	0.08	32,32,32,32	0
54	MG	AA	1664	1/1	0.85	0.11	51,51,51,51	0
54	MG	BA	3048	1/1	0.86	0.13	50,50,50,50	0
54	MG	BA	3083	1/1	0.86	0.22	23,23,23,23	0
54	MG	DA	3007	1/1	0.86	0.10	104,104,104,104	0
54	MG	BA	3085	1/1	0.86	0.14	30,30,30,30	0
54	MG	AA	1651	1/1	0.86	0.30	52,52,52,52	0
54	MG	AA	1643	1/1	0.86	0.18	61,61,61,61	0
54	MG	DA	3020	1/1	0.86	0.13	87,87,87,87	0
54	MG	BA	3041	1/1	0.86	0.29	2,2,2,2	0
54	MG	BA	3190	1/1	0.86	0.19	43,43,43,43	0
54	MG	BA	3193	1/1	0.86	0.07	34,34,34,34	0
54	MG	CA	1656	1/1	0.86	0.07	55,55,55,55	0
54	MG	DA	3081	1/1	0.87	0.10	83,83,83,83	0
54	MG	BA	3159	1/1	0.87	0.11	21,21,21,21	0
54	MG	CA	1629	1/1	0.87	0.09	85,85,85,85	0
54	MG	DA	3071	1/1	0.87	0.08	97,97,97,97	0
54	MG	DA	3099	1/1	0.87	0.10	62,62,62,62	0
54	MG	CA	1649	1/1	0.87	0.20	68,68,68,68	0
54	MG	AA	1669	1/1	0.87	0.15	56,56,56,56	0
54	MG	DA	3133	1/1	0.87	0.21	72,72,72,72	0
54	MG	DA	3110	1/1	0.87	0.16	46,46,46,46	0
54	MG	CA	1648	1/1	0.88	0.18	25,25,25,25	0
54	MG	AA	1662	1/1	0.88	0.14	51,51,51,51	0
54	MG	AA	1614	1/1	0.88	0.15	66,66,66,66	0
54	MG	AA	1665	1/1	0.88	0.12	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3189	1/1	0.88	0.23	38,38,38,38	0
54	MG	CA	1645	1/1	0.88	0.19	42,42,42,42	0
54	MG	DA	3073	1/1	0.88	0.15	74,74,74,74	0
54	MG	DA	3104	1/1	0.88	0.10	67,67,67,67	0
54	MG	AA	1661	1/1	0.88	0.12	43,43,43,43	0
54	MG	CA	1631	1/1	0.89	0.13	97,97,97,97	0
54	MG	BA	3099	1/1	0.89	0.17	55,55,55,55	0
54	MG	BA	3113	1/1	0.89	0.07	14,14,14,14	0
54	MG	AA	1650	1/1	0.89	0.17	42,42,42,42	0
54	MG	AA	1660	1/1	0.89	0.17	51,51,51,51	0
54	MG	BA	3138	1/1	0.89	0.27	7,7,7,7	0
54	MG	BA	3084	1/1	0.89	0.15	41,41,41,41	0
54	MG	DA	3137	1/1	0.89	0.12	88,88,88,88	0
54	MG	CA	1647	1/1	0.89	0.19	42,42,42,42	0
54	MG	DA	3019	1/1	0.89	0.09	84,84,84,84	0
54	MG	AA	1652	1/1	0.89	0.17	55,55,55,55	0
54	MG	DA	3144	1/1	0.89	0.11	63,63,63,63	0
54	MG	DA	3087	1/1	0.89	0.09	70,70,70,70	0
54	MG	BA	3187	1/1	0.90	0.16	30,30,30,30	0
54	MG	DA	3117	1/1	0.90	0.18	73,73,73,73	0
54	MG	DA	3048	1/1	0.90	0.10	61,61,61,61	0
54	MG	CA	1638	1/1	0.90	0.08	83,83,83,83	0
54	MG	CA	1655	1/1	0.90	0.13	44,44,44,44	0
54	MG	CA	1641	1/1	0.90	0.19	69,69,69,69	0
54	MG	DA	3129	1/1	0.90	0.10	81,81,81,81	0
54	MG	CA	1642	1/1	0.90	0.17	26,26,26,26	0
54	MG	DA	3154	1/1	0.90	0.17	42,42,42,42	0
54	MG	CA	1643	1/1	0.90	0.17	56,56,56,56	0
54	MG	CA	1605	1/1	0.90	0.13	91,91,91,91	0
54	MG	DA	3065	1/1	0.90	0.14	49,49,49,49	0
54	MG	DA	3160	1/1	0.90	0.11	44,44,44,44	0
54	MG	BA	3134	1/1	0.90	0.22	47,47,47,47	0
54	MG	CA	1615	1/1	0.90	0.12	57,57,57,57	0
54	MG	DA	3163	1/1	0.90	0.30	59,59,59,59	0
54	MG	BA	3088	1/1	0.90	0.11	35,35,35,35	0
54	MG	DA	3140	1/1	0.90	0.22	34,34,34,34	0
54	MG	DA	3167	1/1	0.90	0.14	47,47,47,47	0
54	MG	DA	3141	1/1	0.90	0.17	40,40,40,40	0
55	VIR	DA	3001	38/38	0.90	0.14	27,39,47,53	0
54	MG	DA	3058	1/1	0.91	0.08	75,75,75,75	0
54	MG	BA	3061	1/1	0.91	0.28	48,48,48,48	0
54	MG	DA	3095	1/1	0.91	0.07	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3011	1/1	0.91	0.08	57,57,57,57	0
54	MG	AA	1631	1/1	0.91	0.10	47,47,47,47	0
54	MG	DA	3157	1/1	0.91	0.19	49,49,49,49	0
54	MG	DA	3016	1/1	0.91	0.10	75,75,75,75	0
54	MG	AA	1602	1/1	0.91	0.23	55,55,55,55	0
54	MG	AA	1635	1/1	0.91	0.14	53,53,53,53	0
54	MG	BA	3124	1/1	0.91	0.09	18,18,18,18	0
54	MG	DA	3026	1/1	0.91	0.09	67,67,67,67	0
54	MG	DA	3076	1/1	0.91	0.07	65,65,65,65	0
54	MG	DA	3049	1/1	0.91	0.07	108,108,108,108	0
54	MG	BA	3160	1/1	0.91	0.08	21,21,21,21	0
54	MG	DA	3086	1/1	0.91	0.09	83,83,83,83	0
54	MG	DA	3124	1/1	0.91	0.08	54,54,54,54	0
54	MG	AA	1654	1/1	0.91	0.21	42,42,42,42	0
54	MG	AA	1637	1/1	0.92	0.08	79,79,79,79	0
54	MG	AA	1649	1/1	0.92	0.07	26,26,26,26	0
54	MG	DA	3151	1/1	0.92	0.09	45,45,45,45	0
54	MG	BA	3125	1/1	0.92	0.17	36,36,36,36	0
54	MG	BA	3062	1/1	0.92	0.23	52,52,52,52	0
54	MG	BA	3173	1/1	0.92	0.10	33,33,33,33	0
54	MG	DA	3155	1/1	0.92	0.10	42,42,42,42	0
54	MG	DA	3012	1/1	0.92	0.19	74,74,74,74	0
54	MG	DA	3098	1/1	0.92	0.08	71,71,71,71	0
54	MG	BA	3176	1/1	0.92	0.12	17,17,17,17	0
54	MG	CA	1650	1/1	0.92	0.12	46,46,46,46	0
54	MG	DA	3070	1/1	0.92	0.12	82,82,82,82	0
54	MG	CA	1652	1/1	0.92	0.08	65,65,65,65	0
54	MG	DA	3043	1/1	0.92	0.11	84,84,84,84	0
54	MG	BA	3055	1/1	0.92	0.09	13,13,13,13	0
54	MG	DA	3047	1/1	0.92	0.09	78,78,78,78	0
54	MG	AA	1655	1/1	0.92	0.10	37,37,37,37	0
54	MG	DA	3080	1/1	0.92	0.08	99,99,99,99	0
54	MG	DA	3025	1/1	0.92	0.11	54,54,54,54	0
54	MG	DA	3147	1/1	0.92	0.20	51,51,51,51	0
54	MG	DA	3008	1/1	0.93	0.12	104,104,104,104	0
54	MG	BA	3150	1/1	0.93	0.10	41,41,41,41	0
54	MG	DA	3112	1/1	0.93	0.11	73,73,73,73	0
54	MG	BA	3151	1/1	0.93	0.08	33,33,33,33	0
54	MG	DA	3074	1/1	0.93	0.14	66,66,66,66	0
54	MG	DA	3116	1/1	0.93	0.10	95,95,95,95	0
54	MG	DA	3150	1/1	0.93	0.34	42,42,42,42	0
54	MG	BA	3156	1/1	0.93	0.14	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	CA	1614	1/1	0.93	0.06	48,48,48,48	0
54	MG	BA	3157	1/1	0.93	0.17	20,20,20,20	0
54	MG	CA	1627	1/1	0.93	0.15	80,80,80,80	0
54	MG	DA	3084	1/1	0.93	0.07	68,68,68,68	0
54	MG	BA	3060	1/1	0.93	0.16	19,19,19,19	0
54	MG	DA	3128	1/1	0.93	0.07	67,67,67,67	0
54	MG	AA	1663	1/1	0.93	0.05	33,33,33,33	0
54	MG	DA	3089	1/1	0.93	0.07	77,77,77,77	0
54	MG	DA	3092	1/1	0.93	0.06	79,79,79,79	0
54	MG	AA	1666	1/1	0.93	0.11	43,43,43,43	0
54	MG	AA	1644	1/1	0.93	0.12	50,50,50,50	0
54	MG	BA	3184	1/1	0.93	0.21	11,11,11,11	0
54	MG	BA	3026	1/1	0.93	0.17	35,35,35,35	0
54	MG	BA	3142	1/1	0.93	0.20	0,0,0,0	0
54	MG	DA	3166	1/1	0.93	0.32	37,37,37,37	0
54	MG	BA	3037	1/1	0.93	0.13	26,26,26,26	0
54	MG	DA	3031	1/1	0.93	0.14	65,65,65,65	0
54	MG	BA	3191	1/1	0.93	0.20	22,22,22,22	0
54	MG	BA	3003	1/1	0.94	0.06	23,23,23,23	0
54	MG	BA	3149	1/1	0.94	0.19	26,26,26,26	0
54	MG	DA	3079	1/1	0.94	0.05	96,96,96,96	0
54	MG	BA	3015	1/1	0.94	0.07	14,14,14,14	0
54	MG	AA	1629	1/1	0.94	0.09	65,65,65,65	0
54	MG	CA	1610	1/1	0.94	0.08	63,63,63,63	0
54	MG	DA	3034	1/1	0.94	0.09	64,64,64,64	0
54	MG	CA	1651	1/1	0.94	0.10	50,50,50,50	0
54	MG	BA	3115	1/1	0.94	0.07	21,21,21,21	0
54	MG	DA	3091	1/1	0.94	0.07	78,78,78,78	0
54	MG	DA	3142	1/1	0.94	0.25	41,41,41,41	0
54	MG	CA	1654	1/1	0.94	0.07	56,56,56,56	0
54	MG	AA	1605	1/1	0.94	0.07	28,28,28,28	0
54	MG	AA	1619	1/1	0.94	0.05	61,61,61,61	0
54	MG	DA	3046	1/1	0.94	0.07	78,78,78,78	0
54	MG	DA	3002	1/1	0.94	0.07	64,64,64,64	0
54	MG	AA	1645	1/1	0.94	0.12	58,58,58,58	0
54	MG	BA	3161	1/1	0.94	0.07	11,11,11,11	0
54	MG	BA	3163	1/1	0.94	0.11	29,29,29,29	0
54	MG	DA	3055	1/1	0.94	0.10	50,50,50,50	0
54	MG	DA	3103	1/1	0.94	0.07	77,77,77,77	0
54	MG	BA	3166	1/1	0.94	0.25	40,40,40,40	0
54	MG	DA	3106	1/1	0.94	0.14	73,73,73,73	0
54	MG	DA	3107	1/1	0.94	0.06	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	DA	3109	1/1	0.94	0.10	48,48,48,48	0
54	MG	BA	3169	1/1	0.94	0.09	24,24,24,24	0
54	MG	BA	3080	1/1	0.94	0.08	22,22,22,22	0
54	MG	BA	3174	1/1	0.94	0.06	21,21,21,21	0
54	MG	BA	3175	1/1	0.94	0.09	20,20,20,20	0
54	MG	AA	1628	1/1	0.94	0.08	53,53,53,53	0
54	MG	CA	1639	1/1	0.94	0.07	52,52,52,52	0
54	MG	DA	3118	1/1	0.94	0.07	71,71,71,71	0
54	MG	BA	3180	1/1	0.94	0.07	31,31,31,31	0
54	MG	BA	3181	1/1	0.94	0.10	31,31,31,31	0
54	MG	AN	201	1/1	0.94	0.14	60,60,60,60	0
54	MG	BA	3002	1/1	0.94	0.06	15,15,15,15	0
54	MG	DB	201	1/1	0.94	0.07	101,101,101,101	0
54	MG	BA	3146	1/1	0.94	0.09	6,6,6,6	0
54	MG	D2	101	1/1	0.94	0.10	78,78,78,78	0
54	MG	DA	3075	1/1	0.94	0.07	64,64,64,64	0
54	MG	BA	3053	1/1	0.95	0.07	8,8,8,8	0
54	MG	BA	3178	1/1	0.95	0.07	12,12,12,12	0
54	MG	AA	1630	1/1	0.95	0.09	53,53,53,53	0
54	MG	AA	1625	1/1	0.95	0.11	19,19,19,19	0
54	MG	DA	3126	1/1	0.95	0.08	57,57,57,57	0
54	MG	BA	3035	1/1	0.95	0.25	44,44,44,44	0
54	MG	CA	1632	1/1	0.95	0.07	77,77,77,77	0
54	MG	AA	1609	1/1	0.95	0.07	46,46,46,46	0
54	MG	AA	1616	1/1	0.95	0.07	47,47,47,47	0
54	MG	BA	3141	1/1	0.95	0.08	22,22,22,22	0
54	MG	DA	3040	1/1	0.95	0.10	57,57,57,57	0
54	MG	DA	3135	1/1	0.95	0.07	54,54,54,54	0
54	MG	BA	3045	1/1	0.95	0.05	20,20,20,20	0
54	MG	BA	3167	1/1	0.95	0.06	35,35,35,35	0
54	MG	CA	1602	1/1	0.95	0.07	79,79,79,79	0
54	MG	BA	3102	1/1	0.95	0.06	9,9,9,9	0
54	MG	BA	3170	1/1	0.95	0.07	23,23,23,23	0
54	MG	AA	1670	1/1	0.95	0.17	40,40,40,40	0
54	MG	BA	3075	1/1	0.95	0.08	19,19,19,19	0
54	MG	DA	3082	1/1	0.95	0.07	62,62,62,62	0
54	MG	BA	3116	1/1	0.95	0.09	48,48,48,48	0
54	MG	CA	1617	1/1	0.95	0.08	36,36,36,36	0
54	MG	CA	1618	1/1	0.95	0.07	38,38,38,38	0
54	MG	CA	1622	1/1	0.95	0.06	50,50,50,50	0
54	MG	BA	3182	1/1	0.96	0.08	21,21,21,21	0
54	MG	BA	3122	1/1	0.96	0.08	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1626	1/1	0.96	0.13	56,56,56,56	0
54	MG	DA	3097	1/1	0.96	0.05	62,62,62,62	0
54	MG	BA	3081	1/1	0.96	0.05	19,19,19,19	0
54	MG	BA	3132	1/1	0.96	0.12	44,44,44,44	0
54	MG	AA	1612	1/1	0.96	0.07	43,43,43,43	0
54	MG	CA	1637	1/1	0.96	0.08	66,66,66,66	0
54	MG	BA	3192	1/1	0.96	0.12	17,17,17,17	0
54	MG	BA	3017	1/1	0.96	0.14	24,24,24,24	0
54	MG	DA	3018	1/1	0.96	0.07	59,59,59,59	0
54	MG	DA	3064	1/1	0.96	0.06	47,47,47,47	0
54	MG	CA	1601	1/1	0.96	0.06	35,35,35,35	0
54	MG	AA	1607	1/1	0.96	0.05	51,51,51,51	0
54	MG	AA	1610	1/1	0.96	0.13	69,69,69,69	0
54	MG	CA	1607	1/1	0.96	0.07	56,56,56,56	0
54	MG	CA	1608	1/1	0.96	0.06	61,61,61,61	0
54	MG	CA	1609	1/1	0.96	0.09	82,82,82,82	0
54	MG	AA	1638	1/1	0.96	0.07	61,61,61,61	0
54	MG	AA	1639	1/1	0.96	0.10	53,53,53,53	0
54	MG	DA	3077	1/1	0.96	0.11	62,62,62,62	0
54	MG	BA	3172	1/1	0.96	0.09	26,26,26,26	0
54	MG	BA	3103	1/1	0.96	0.14	8,8,8,8	0
54	MG	BA	3044	1/1	0.96	0.04	21,21,21,21	0
54	MG	AA	1642	1/1	0.96	0.05	23,23,23,23	0
54	MG	DA	3038	1/1	0.96	0.05	77,77,77,77	0
54	MG	CA	1653	1/1	0.96	0.14	40,40,40,40	0
54	MG	CA	1619	1/1	0.96	0.07	41,41,41,41	0
54	MG	BA	3004	1/1	0.96	0.07	27,27,27,27	0
54	MG	BA	3120	1/1	0.96	0.17	39,39,39,39	0
54	MG	DA	3090	1/1	0.96	0.11	81,81,81,81	0
54	MG	BA	3154	1/1	0.96	0.29	33,33,33,33	0
54	MG	BA	3155	1/1	0.96	0.12	18,18,18,18	0
55	VIR	BA	3001	38/38	0.96	0.10	3,15,28,31	0
54	MG	DA	3004	1/1	0.96	0.06	69,69,69,69	0
54	MG	DA	3085	1/1	0.97	0.04	83,83,83,83	0
54	MG	AA	1656	1/1	0.97	0.07	37,37,37,37	0
54	MG	BA	3188	1/1	0.97	0.06	6,6,6,6	0
54	MG	DA	3088	1/1	0.97	0.05	61,61,61,61	0
54	MG	DA	3044	1/1	0.97	0.05	57,57,57,57	0
54	MG	BA	3106	1/1	0.97	0.09	0,0,0,0	0
54	MG	BA	3162	1/1	0.97	0.15	32,32,32,32	0
54	MG	DA	3006	1/1	0.97	0.06	99,99,99,99	0
54	MG	AA	1623	1/1	0.97	0.06	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3143	1/1	0.97	0.25	15,15,15,15	0
54	MG	BA	3078	1/1	0.97	0.07	21,21,21,21	0
54	MG	DA	3052	1/1	0.97	0.05	35,35,35,35	0
54	MG	DA	3054	1/1	0.97	0.07	36,36,36,36	0
54	MG	BB	201	1/1	0.97	0.05	36,36,36,36	0
54	MG	DA	3056	1/1	0.97	0.07	61,61,61,61	0
54	MG	BB	202	1/1	0.97	0.04	8,8,8,8	0
54	MG	BA	3168	1/1	0.97	0.07	19,19,19,19	0
54	MG	DA	3102	1/1	0.97	0.05	64,64,64,64	0
54	MG	BA	3079	1/1	0.97	0.04	41,41,41,41	0
54	MG	CA	1604	1/1	0.97	0.05	88,88,88,88	0
54	MG	BA	3148	1/1	0.97	0.19	28,28,28,28	0
54	MG	CA	1606	1/1	0.97	0.07	68,68,68,68	0
54	MG	DA	3108	1/1	0.97	0.05	74,74,74,74	0
54	MG	AA	1668	1/1	0.97	0.11	36,36,36,36	0
54	MG	DA	3021	1/1	0.97	0.13	56,56,56,56	0
54	MG	DA	3111	1/1	0.97	0.10	41,41,41,41	0
54	MG	AA	1653	1/1	0.97	0.13	21,21,21,21	0
54	MG	BA	3005	1/1	0.97	0.06	45,45,45,45	0
54	MG	BA	3152	1/1	0.97	0.04	14,14,14,14	0
54	MG	DA	3115	1/1	0.97	0.07	48,48,48,48	0
54	MG	BA	3008	1/1	0.97	0.08	32,32,32,32	0
54	MG	CA	1612	1/1	0.97	0.04	43,43,43,43	0
54	MG	AA	1601	1/1	0.97	0.06	56,56,56,56	0
54	MG	BA	3070	1/1	0.97	0.06	59,59,59,59	0
54	MG	BA	3072	1/1	0.97	0.09	13,13,13,13	0
54	MG	BA	3158	1/1	0.97	0.05	16,16,16,16	0
54	MG	BA	3183	1/1	0.97	0.18	26,26,26,26	0
54	MG	DB	202	1/1	0.97	0.10	61,61,61,61	0
54	MG	DB	203	1/1	0.97	0.06	79,79,79,79	0
54	MG	DA	3037	1/1	0.97	0.07	59,59,59,59	0
54	MG	CA	1621	1/1	0.97	0.05	69,69,69,69	0
54	MG	AA	1622	1/1	0.97	0.09	51,51,51,51	0
54	MG	CA	1625	1/1	0.97	0.07	22,22,22,22	0
54	MG	CA	1634	1/1	0.98	0.04	50,50,50,50	0
54	MG	BA	3091	1/1	0.98	0.06	21,21,21,21	0
54	MG	DA	3024	1/1	0.98	0.03	65,65,65,65	0
54	MG	BA	3092	1/1	0.98	0.04	53,53,53,53	0
54	MG	BA	3164	1/1	0.98	0.24	15,15,15,15	0
54	MG	BB	203	1/1	0.98	0.03	11,11,11,11	0
54	MG	BB	204	1/1	0.98	0.23	6,6,6,6	0
54	MG	CA	1640	1/1	0.98	0.10	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BD	301	1/1	0.98	0.04	34,34,34,34	0
54	MG	BA	3031	1/1	0.98	0.07	3,3,3,3	0
54	MG	DA	3032	1/1	0.98	0.06	61,61,61,61	0
54	MG	BA	3139	1/1	0.98	0.19	3,3,3,3	0
54	MG	DA	3083	1/1	0.98	0.04	54,54,54,54	0
54	MG	BA	3032	1/1	0.98	0.08	6,6,6,6	0
54	MG	DA	3035	1/1	0.98	0.05	43,43,43,43	0
54	MG	BA	3006	1/1	0.98	0.06	47,47,47,47	0
54	MG	AA	1620	1/1	0.98	0.04	37,37,37,37	0
54	MG	BA	3171	1/1	0.98	0.08	16,16,16,16	0
54	MG	DA	3039	1/1	0.98	0.06	65,65,65,65	0
54	MG	BA	3144	1/1	0.98	0.03	12,12,12,12	0
54	MG	BA	3145	1/1	0.98	0.24	37,37,37,37	0
54	MG	BA	3108	1/1	0.98	0.05	9,9,9,9	0
54	MG	BA	3110	1/1	0.98	0.16	2,2,2,2	0
54	MG	BA	3111	1/1	0.98	0.03	24,24,24,24	0
54	MG	BA	3177	1/1	0.98	0.26	37,37,37,37	0
54	MG	BA	3057	1/1	0.98	0.07	6,6,6,6	0
54	MG	CA	1616	1/1	0.98	0.06	34,34,34,34	0
54	MG	BA	3179	1/1	0.98	0.09	37,37,37,37	0
54	MG	BA	3024	1/1	0.98	0.06	1,1,1,1	0
54	MG	BA	3059	1/1	0.98	0.05	17,17,17,17	0
54	MG	DA	3051	1/1	0.98	0.05	60,60,60,60	0
54	MG	CA	1620	1/1	0.98	0.04	59,59,59,59	0
54	MG	DA	3053	1/1	0.98	0.03	53,53,53,53	0
54	MG	BA	3042	1/1	0.98	0.07	11,11,11,11	0
54	MG	DA	3105	1/1	0.98	0.05	67,67,67,67	0
54	MG	AA	1615	1/1	0.98	0.04	63,63,63,63	0
54	MG	CA	1623	1/1	0.98	0.10	45,45,45,45	0
54	MG	BA	3028	1/1	0.98	0.10	16,16,16,16	0
54	MG	CA	1626	1/1	0.98	0.05	52,52,52,52	0
54	MG	BA	3185	1/1	0.98	0.19	13,13,13,13	0
54	MG	DA	3060	1/1	0.98	0.05	41,41,41,41	0
54	MG	BA	3063	1/1	0.98	0.06	9,9,9,9	0
54	MG	BA	3127	1/1	0.98	0.08	9,9,9,9	0
54	MG	BA	3128	1/1	0.98	0.03	9,9,9,9	0
54	MG	BA	3086	1/1	0.98	0.05	10,10,10,10	0
54	MG	BA	3133	1/1	0.98	0.10	27,27,27,27	0
54	MG	DA	3066	1/1	0.98	0.04	32,32,32,32	0
54	MG	DA	3069	1/1	0.98	0.10	53,53,53,53	0
54	MG	DA	3119	1/1	0.98	0.04	50,50,50,50	0
54	MG	BA	3047	1/1	0.98	0.07	4,4,4,4	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	AA	1621	1/1	0.99	0.12	16,16,16,16	0
54	MG	CA	1613	1/1	0.99	0.07	15,15,15,15	0
54	MG	AA	1603	1/1	0.99	0.10	49,49,49,49	0
54	MG	BA	3089	1/1	0.99	0.13	28,28,28,28	0
54	MG	BA	3090	1/1	0.99	0.04	3,3,3,3	0
54	MG	BA	3153	1/1	0.99	0.07	6,6,6,6	0
54	MG	AA	1632	1/1	0.99	0.04	39,39,39,39	0
54	MG	AA	1647	1/1	0.99	0.03	54,54,54,54	0
54	MG	BA	3093	1/1	0.99	0.05	33,33,33,33	0
54	MG	BA	3094	1/1	0.99	0.05	21,21,21,21	0
54	MG	BA	3095	1/1	0.99	0.07	30,30,30,30	0
54	MG	BA	3096	1/1	0.99	0.03	5,5,5,5	0
54	MG	CA	1624	1/1	0.99	0.04	49,49,49,49	0
54	MG	BA	3098	1/1	0.99	0.04	3,3,3,3	0
54	MG	BA	3007	1/1	0.99	0.04	17,17,17,17	0
54	MG	BA	3100	1/1	0.99	0.05	8,8,8,8	0
54	MG	BA	3101	1/1	0.99	0.04	5,5,5,5	0
54	MG	AA	1633	1/1	0.99	0.06	38,38,38,38	0
54	MG	BA	3165	1/1	0.99	0.06	2,2,2,2	0
54	MG	BA	3049	1/1	0.99	0.02	11,11,11,11	0
54	MG	BA	3104	1/1	0.99	0.04	12,12,12,12	0
54	MG	BA	3105	1/1	0.99	0.10	0,0,0,0	0
54	MG	BA	3051	1/1	0.99	0.06	4,4,4,4	0
54	MG	DA	3122	1/1	0.99	0.05	39,39,39,39	0
54	MG	BA	3052	1/1	0.99	0.03	8,8,8,8	0
54	MG	BA	3109	1/1	0.99	0.08	1,1,1,1	0
54	MG	BA	3009	1/1	0.99	0.06	3,3,3,3	0
54	MG	BA	3012	1/1	0.99	0.05	9,9,9,9	0
54	MG	BA	3112	1/1	0.99	0.03	7,7,7,7	0
54	MG	BA	3013	1/1	0.99	0.08	0,0,0,0	0
54	MG	DA	3130	1/1	0.99	0.08	37,37,37,37	0
54	MG	DA	3131	1/1	0.99	0.05	69,69,69,69	0
54	MG	BA	3114	1/1	0.99	0.07	0,0,0,0	0
54	MG	BA	3014	1/1	0.99	0.07	0,0,0,0	0
54	MG	AA	1606	1/1	0.99	0.06	35,35,35,35	0
54	MG	BA	3117	1/1	0.99	0.07	2,2,2,2	0
54	MG	BA	3119	1/1	0.99	0.04	12,12,12,12	0
54	MG	AA	1624	1/1	0.99	0.03	32,32,32,32	0
54	MG	BA	3121	1/1	0.99	0.03	4,4,4,4	0
54	MG	AA	1636	1/1	0.99	0.06	11,11,11,11	0
54	MG	BA	3020	1/1	0.99	0.13	2,2,2,2	0
54	MG	BA	3021	1/1	0.99	0.05	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3186	1/1	0.99	0.04	23,23,23,23	0
54	MG	DA	3067	1/1	0.99	0.03	48,48,48,48	0
54	MG	DA	3068	1/1	0.99	0.03	51,51,51,51	0
54	MG	BA	3126	1/1	0.99	0.08	1,1,1,1	0
54	MG	BA	3023	1/1	0.99	0.07	2,2,2,2	0
54	MG	BA	3068	1/1	0.99	0.11	0,0,0,0	0
54	MG	BA	3129	1/1	0.99	0.08	3,3,3,3	0
54	MG	BA	3131	1/1	0.99	0.06	2,2,2,2	0
54	MG	BA	3069	1/1	0.99	0.04	7,7,7,7	0
54	MG	AA	1617	1/1	0.99	0.03	33,33,33,33	0
54	MG	BA	3194	1/1	0.99	0.04	28,28,28,28	0
54	MG	BA	3071	1/1	0.99	0.04	6,6,6,6	0
54	MG	BA	3135	1/1	0.99	0.05	1,1,1,1	0
54	MG	BA	3025	1/1	0.99	0.04	3,3,3,3	0
54	MG	AA	1604	1/1	0.99	0.05	55,55,55,55	0
54	MG	BA	3027	1/1	0.99	0.03	3,3,3,3	0
54	MG	DA	3010	1/1	0.99	0.05	71,71,71,71	0
54	MG	BQ	201	1/1	0.99	0.08	0,0,0,0	0
54	MG	BA	3076	1/1	0.99	0.03	12,12,12,12	0
54	MG	DA	3013	1/1	0.99	0.06	45,45,45,45	0
54	MG	BA	3140	1/1	0.99	0.19	1,1,1,1	0
54	MG	DA	3015	1/1	0.99	0.05	46,46,46,46	0
54	MG	CA	1603	1/1	0.99	0.07	36,36,36,36	0
54	MG	AA	1627	1/1	0.99	0.02	39,39,39,39	0
54	MG	BA	3030	1/1	0.99	0.12	14,14,14,14	0
54	MG	AA	1640	1/1	0.99	0.05	21,21,21,21	0
54	MG	AA	1641	1/1	0.99	0.08	22,22,22,22	0
54	MG	BA	3033	1/1	0.99	0.05	6,6,6,6	0
54	MG	DA	3022	1/1	0.99	0.10	56,56,56,56	0
54	MG	DA	3023	1/1	0.99	0.05	50,50,50,50	0
54	MG	AA	1613	1/1	0.99	0.03	26,26,26,26	0
54	MG	AA	1608	1/1	0.99	0.03	18,18,18,18	0
54	MG	BA	3040	1/1	0.99	0.03	0,0,0,0	0
56	ZN	D4	101	1/1	0.99	0.02	84,84,84,84	0
54	MG	BA	3082	1/1	1.00	0.08	0,0,0,0	0
54	MG	BA	3034	1/1	1.00	0.14	0,0,0,0	0
54	MG	BA	3107	1/1	1.00	0.13	1,1,1,1	0
54	MG	DA	3123	1/1	1.00	0.09	38,38,38,38	0
54	MG	BA	3010	1/1	1.00	0.03	0,0,0,0	0
54	MG	BA	3064	1/1	1.00	0.06	1,1,1,1	0
54	MG	BA	3065	1/1	1.00	0.08	0,0,0,0	0
54	MG	BA	3087	1/1	1.00	0.07	2,2,2,2	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	BA	3066	1/1	1.00	0.03	3,3,3,3	0
54	MG	BA	3067	1/1	1.00	0.05	1,1,1,1	0
54	MG	BA	3036	1/1	1.00	0.03	2,2,2,2	0
54	MG	BA	3050	1/1	1.00	0.03	4,4,4,4	0
54	MG	BA	3022	1/1	1.00	0.05	1,1,1,1	0
54	MG	BA	3038	1/1	1.00	0.08	0,0,0,0	0
54	MG	BA	3118	1/1	1.00	0.03	5,5,5,5	0
54	MG	BA	3039	1/1	1.00	0.06	0,0,0,0	0
54	MG	BA	3073	1/1	1.00	0.06	2,2,2,2	0
54	MG	BA	3054	1/1	1.00	0.03	2,2,2,2	0
54	MG	BA	3097	1/1	1.00	0.05	2,2,2,2	0
54	MG	BA	3123	1/1	1.00	0.09	0,0,0,0	0
54	MG	BA	3029	1/1	1.00	0.06	0,0,0,0	0
54	MG	BA	3011	1/1	1.00	0.04	0,0,0,0	0
54	MG	BA	3018	1/1	1.00	0.04	0,0,0,0	0
54	MG	BA	3043	1/1	1.00	0.05	2,2,2,2	0
54	MG	BA	3019	1/1	1.00	0.07	15,15,15,15	0
54	MG	AA	1611	1/1	1.00	0.03	12,12,12,12	0
54	MG	BA	3130	1/1	1.00	0.04	0,0,0,0	0
56	ZN	B4	101	1/1	1.00	0.01	29,29,29,29	0
54	MG	BA	3046	1/1	1.00	0.02	5,5,5,5	0

6.5 Other polymers (i)

There are no such residues in this entry.